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THE

WORKS

OF

GEORGE BERKELEY, D.D.

LATE BISHOP OF CLOYNE IN IRELAND.

TO WHICH IS ADDED,

AN ACCOUNT OF HIS LIFE;

AND

SEVERAL OF HIS LETTERS

TO

THOMAS PRIOR, ESQ. DEAN GERVAIS, MR. POPE, &c.

IN THREE VOLUMES.

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LIFE

OF

THE AUTHOR.*

DR. GEORGE BERKELEY, the learned and ingenious bishop of Cloyne in Ireland, was a native of that kingdom, and the son of WILLIAM BERKELEY of Thomastown, in the county of Kilkenny, whose father went over to Ireland after the Restoration, (the family having suffered greatly for their loyalty to Charles I.) and there obtained the collectorship of Belfast.

Our author was born March 12, 1684, at Kilcrin near Thomastown, received the first part of his education at Kilkenny school under Dr. Hinton, and was admitted a pensioner of Trinity-college, Dublin, at the age of fifteen, under the tuition of Dr. Hall. He was admitted fellow of that college June 9, 1707, having previously sustained with honour the very trying examination which the candidates for that preferment are by the statutes required to undergo.

The first proof he gave of his literary abilities was *Arithmetica absque Algebra aut Euclide demonstrata,* which from the preface he appears to have written before he was twenty years old, though he did not publish it till 1707. It is dedicated to Mr. Palliser, son to the Archbishop of Cashel, and is followed by a Mathematical Miscellany, containing some very ingenious observations and theorems inscribed to his pupil Mr. Samuel Molyneaux, a gentleman of whom we shall have occasion to make further mention presently, and whose father was the celebrated friend and correspondent of Mr. Locke.

* To authenticate the following account of Bishop Berkeley, it is thought proper to inform the reader, that the particulars were for the most part communicated by the Rev. Robert Berkeley, D. D. rector of Middleton, in the diocess of Cloyne, brother to the Bishop; and the whole was drawn up by the Rev. Joseph Stock, D. D. late F.T.C.D.

His *Theory of Vision* was published in 1709, and the *Principles of Human Knowledge* appeared the year after. The airy visions of romances, to the reading of which he was much addicted, disgust at the books of metaphysics then received in the university, and that inquisitive attention to the operations of the mind which about this time was excited by the writings of Mr. Locke and Father Malebranche, probably gave birth to his disbelief of the existence of matter.*

* When the Principles of Human Knowledge were first published, the ingenious author sent copies of the work to Dr. Clarke and Mr. Whiston. What effect it produced upon the latter, the reader may possibly be entertained with learning from his own words: Memoirs of Dr. Clarke, page 79—81.

"And perhaps it will not be here improper, by way of caution, to take notice of the pernicious consequence such metaphysical subtilties have sometimes had, even against common sense and common experience, as in the cases of those three famous men, Mons. Leibnitz, Mr. Locke, and Mr. Berkeley.—[The first in his pre-established Harmony: the second in the dispute with Limborch about Human Liberty.]—And as to the third named, Mr. Berkeley, he published, A. D. 1710, at Dublin, this metaphysic notion, that *matter* was not *a real thing*; nay, that the common opinion of its *reality* was groundless, if not ridiculous. He was pleased to send Dr. Clarke and myself, each of us, a book. After we had both perused it, I went to Dr. Clarke, and discoursed with him about it to this effect; that I, being not a metaphysician, was not able to answer Mr. Berkeley's subtile *premises*, though I did not at all believe his absurd *conclusion*. I therefore desired that he, who was deep in such subtilties, but did not appear to believe Mr. Berkeley's conclusions, would answer him: which task he declined. I speak not these things with intention to reproach either Mr. Locke or Dean Berkeley.—I own the latter's great abilities in other parts of learning; and to his noble design of settling a college in or near the West Indies, for the instruction of the natives in civil arts, and in the principles of Christianity, I heartily wish all possible success. It is the pretended metaphysic science itself, derived from the sceptical disputes of the Greek philosophers, not those particular great men who have been unhappily imposed on by it, that I complain of. Accordingly when the famous Milton had a mind to represent the vain reasonings of wicked spirits in Hades, he described it by their endless train of metaphysics, thus:

"'*Others apart sat on a hill retired*,' &c."

Par. Lost, ii. 557—561.

Many years after this, at Mr. Addison's instance, there was a meeting of Drs. Clarke and Berkeley to discuss this speculative point; and great hopes were entertained from the conference. The parties, however, separated without being able to come to any agreement. Dr. B. declared himself not well satisfied with the conduct of his antagonist on the occasion, who, though he could not answer, had not candour enough to own

In 1712, the principles inculcated in Mr. Locke's *Two Treatises of Government* seem to have turned his attention to the doctrine of passive obedience; in support of which he printed the substance of three Common-places delivered by him that year in the college chapel, a work which afterwards had nearly done him some injury in his fortune. For, being presented by Mr. Molyneaux abovementioned to their late Majesties, then Prince and Princess of Wales (whose secretary Mr. Molyneaux had been at Hanover), he was by them recommended to Lord Galway for some preferment in the church of Ireland. But Lord Galway, having heard of those sermons, represented him as a Jacobite; an impression which Mr. Molyneaux, as soon as he was apprised of it, took care to remove from the minds of their Highnesses by producing the work in question, and shewing that it contained nothing but principles of loyalty to the present happy establishment. This was the first occasion of our Author's being known to Queen Caroline.

In February 1713, he crossed the water, and published in London a further defence of his celebrated system of immaterialism, in *Three Dialogues between Hylas and Philonous*. Acuteness of parts and a beautiful imagination were so conspicuous in his writings, that his reputation was now established, and his company was courted, even where his opinions did not find admission. Two gentlemen of opposite principles concurred in introducing him to the acquaintance of the learned and the great; Sir Richard Steele and Dr. Swift. He wrote several papers in the Guardian for the former, and at his house became acquainted with Mr. Pope, with whom he continued to live in strict friendship during his life. Dean Swift, besides Lord Berkeley of Stratton (to whom our author dedicated his last published dialogues between *Hylas* and *Philonous*), and other valuable acquaintance, recommended him to the celebrated Earl of Peterborough, who being appointed embassador to the King of Sicily and to the other Italian states, took Mr. Berkeley with him in quality of chaplain and secretary, in November 1713.

At Leghorn, his Lordship's well known activity induced him to disencumber himself of his chaplain and the greatest part of his retinue, whom he left in that town for upwards of three months,

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himself convinced. But the complaints of disputants against each other, especially on subjects of this abstruse nature, should be heard with suspicion.

while he discharged the business of his embassy in Sicily, as our author informs his friend Pope in the conclusion of a complimentary letter addressed to that poet on the Rape of the Lock, dated Leghorn, May 1, 1714. It may not be amiss to record a little incident that befel Mr. Berkeley in this city, with the relation of which he used sometimes to make himself merry among his friends. Basil Kennett, the author of the Roman Antiquities, was then chaplain to the English factory at Leghorn, the only place in Italy where the English service is tolerated by the government, which favour had lately been obtained from the Grand Duke at the particular instance of Queen Anne. This gentleman requested Mr. Berkeley to preach for him one Sunday. The day following, as Berkeley was sitting in his chamber, a procession of priests in surplices, and with all other formalities, entered the room, and without taking the least notice of the wondering inhabitant, marched quite round it, muttering certain prayers. His fears immediately suggested to him, that this could be no other than a visit from the Inquisition, who had heard of his officiating before heretics without licence the day before. As soon as they were gone, he ventured with much caution to inquire into the cause of this extraordinary appearance, and was happy to be informed, that this was the season appointed by the Romish calendar for solemnly blessing the houses of all good catholics from rats and other vermin; a piece of intelligence which changed his terror into mirth.

He returned to England with Lord Peterborough in August 1714;* and his hopes of preferment through this channel expiring with the fall of Queen Anne's ministry, he some time after embraced an advantageous offer made him by Dr. St. George Ashe, bishop of Clogher, and late provost of Trinity-college, Dublin, of accompanying his son, Mr. Ashe (who was heir to a very considerable property), in a tour through Europe.

At Paris, having now more leisure than when he first passed through that city, Mr. Berkeley took care to pay his respects

* *In August*, 1714.] Towards the close of this year he had a fever, in describing the event of which to his friend Swift, Dr. Arbuthnot cannot forbear indulging a little of that pleasantry on Berkeley's system, with which it has frequently since been treated by such as could not, or would not, be at the pains to acquire a thorough knowledge of it. "October 19, 1714. Poor philosopher Berkeley has now *the idea of health*, which was very hard to produce in him; for he had *an idea* of a strange fever on him so strong, that it was very hard to destroy it by introducing a contrary one."

to his rival in metaphysical sagacity, the illustrious Pere Malebranche. He found this ingenious father in his cell, cooking in a small pipkin a medicine for a disorder with which he was then troubled, an inflammation on the lungs. The conversation naturally turned on our author's system, of which the other had received some knowledge from a translation just published. But the issue of this debate proved tragical to poor Malebranche.—In the heat of disputation he raised his voice so high, and gave way so freely to the natural impetuosity of a man of parts and a Frenchman, that he brought on himself a violent increase of his disorder, which carried him off a few days after *.

In this second excursion abroad Mr. Berkeley employed upwards of four years; and besides all those places which are usually visited by travellers in what is called the grand tour, his curiosity carried him to some that are less frequented. In particular he travelled over Apulia (from which he wrote an accurate and entertaining account of the *tarantula* to Dr. Freind), Calabria, and the whole island of Sicily. This last country engaged his attention so strongly, that he had with great industry compiled very considerable materials for a natural history of the island: but, by an unfortunate accident, these, together with a journal of his transactions there, were lost in the passage to Naples; nor could he be prevailed upon afterwards to recollect and commit those curious particulars again to paper. What an injury the literary world has sustained by this mischance, may in part be collected from the specimen he has left of his talent for lively description, in his letter to Mr. Pope concerning the island of Inarime (now Ischia, in the bay of Naples), dated Naples, October 22, 1717; and in another from the same city to Dr. Arbuthnot, giving an account of an eruption of Mount Vesuvius, which he had the good fortune to have more than one opportunity of examining very minutely.

On his way homeward, he drew up at Lyons a curious tract *De Motu*, which he sent to the Royal Academy of Sciences at Paris, the subject being proposed by that assembly, and committed it to the press shortly after his arrival in London in 1721. But from these abstruse speculations he was drawn away for a while by the humanity of his temper and concern for the public welfare. It is well known what miseries the nation was plunged into by the fatal South-sea scheme in 1720. Mr. Berkeley felt

* He died October 13, 1715. Dict. hist. portatif. d'Advocat.

for his country and British neighbours groaning under these calamitous distresses, and in that spirit employed his talents in writing *An Essay towards preventing the Ruin of Great Britain*, printed London 1721.

His travels had now so far improved his natural politeness, and added such charms to his conversation, that he found a ready admission into the best company in London. Among the rest, Mr. Pope introduced him to Lord Burlington, who conceived a high esteem for him on account of his great taste and skill in architecture, an art of which his Lordship was an excellent judge and patron, and which Mr. Berkeley had made his particular study while in Italy. By this nobleman he was recommended to the Duke of Grafton, lord-lieutenant of Ireland, who took him over to Ireland as one of his chaplains in 1721, after he had been absent from his native country more than six years. He had been elected a senior fellow of his college in July 1717, and now took the degrees of bachelor and doctor in divinity, November 14, 1721.

The year following, his fortune received a considerable increase from a very unexpected event. On his first going to London in the year 1713, Dean Swift introduced him to the family of Mrs. Esther Vanhomrigh (the celebrated Vanessa), and took him often to dine at her house. Some years before her death, this lady removed to Ireland, and fixed her residence at Celbridge, a pleasant village in the neighbourhood of Dublin, most probably with a view of often enjoying the company of a man for whom she seems to have entertained a very singular attachment. But finding herself totally disappointed in this expectation, and discovering the Dean's connexion with Stella, she was so enraged at his infidelity, that she altered her intention of making him her heir, and left the whole of her fortune, amounting to near 8000*l.* to be divided equally between two gentlemen whom she named her executors, Mr. Marshal, a lawyer, afterwards Mr. Justice Marshal, and Dr. Berkeley, S.F.T.C.D. The Doctor received the news of this bequest from Mr. Marshal with great surprise, as he had never once seen the lady who had honoured him with such a proof of her esteem, from the time of his return to Ireland to her death.

In the discharge, however, of his trust as executor, he had an opportunity of shewing he by no means adopted the sentiments of his benefactress with regard to Swift. Several letters that had passed between Cadenus and Vanessa falling into his hands,

he committed them immediately to the flames; not because there was any thing criminal in them; for he frequently assured Dr. Delany* and others of the contrary; but he observed a warmth in the lady's style, which delicacy required him to conceal from the public. Dr. Berkeley, it seems, was not apprised of a strong proof this exasperated female had just given how little regard she herself retained for the virtue of delicacy. On her death-bed, she delivered to Mr. Marshal a copy, in her own hand-writing, of the entire correspondence between herself and the Dean, with a strict injunction to publish it immediately after her decease. What prevented the execution of this request, cannot now be affirmed with certainty: possibly the executor did not care to draw on himself the lash of that pen, from which a particular friend of his† had lately smarted so severely. Some years after the Dean's death, Mr. Marshal had serious thoughts of fulfilling the intention of Vanessa. With this view he shewed the letters to several persons of his acquaintance, without any injunction of secrecy: which may account for the extracts of them that have lately got into print. The affair, however, was protracted, till the death of Judge Marshal put a stop to it entirely. The letters are still in being: and whenever curiosity or avarice shall draw them into public light, it is probable they will be found after all to be as trifling and as innocent as those which our Author saw and suppressed.

May 16, 1724, Dr. Berkeley resigned his fellowship, being promoted by his patron the Duke of Grafton to the deanery of Derry, worth 1100*l.* per annum. In the interval between this removal and his return from abroad, his mind had been employed in conceiving that benevolent project, which alone entitles him to as much honour as all his learned labours have procured him, the *Scheme for converting the savage Americans to Christianity, by a College to be erected in the Summer islands, otherwise called the isles of Bermuda.* He published a proposal‡ for this

* See Delany's Observations on Orrery's Remarks.

† Mr. Bettesworth.

‡ *A Proposal for converting the savage Americans.*] With this proposal he carried a letter of recommendation from Dean Swift to Lord Carteret, lieutenant of Ireland, which deserves a place here, both because it contains a number of particulars of our Author's life, and is besides a proof, as well of the friendly temper of the writer, as of his politeness and address.

"September 3, 1724.—There is a gentleman of this kingdom just gone for England: it is Dr. George Berkeley, dean of Derry, the best preferment among us, being worth about 1100*l.* a year. He takes the Bath

purpose, London 1725, and offered to resign his own opulent preferment, and to dedicate the remainder of his life to the instructing the youth in America, on the moderate subsistence of 100*l.* yearly. Such was the force of this disinterested example, supported by the eloquence of an enthusiast for the good of mankind, that three junior fellows of Trinity-college, Dublin, the Reverend William Thompson, Jonathan Rogers, and James King, masters of arts, consented to take their fortunes with the author of the project, and to exchange for a settlement in the Atlantic ocean at 40*l.* per annum, all their prospects at home; and that too at a time when a fellowship of Dublin-college was

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in his way to London, and will of course attend your Excellency, and be presented, I suppose, by his friend my Lord Burlington: and, because I believe you will choose out some very idle minutes to read this letter, perhaps you may not be ill entertained with some account of the man and his errand. He was a fellow in the university here; and going to England very young, about thirteen years ago, he became the founder of a sect there called the Immaterialists, by the force of a very curious book on that subject: Dr. Smalridge and many other eminent persons were his proselytes. I sent him secretary and chaplain to Sicily with my Lord Peterborough; and upon his Lordship's return, Dr. Berkeley spent above seven years in travelling over most parts of Europe, but chiefly through every corner of Italy, Sicily, and other islands. When he came back to England, he found so many friends, that he was effectually recommended to the Duke of Grafton, by whom he was lately made dean of Derry. Your Excellency will be frighted when I tell you all this is but an introduction; for I am now to mention his errand. He is an absolute philosopher with regard to money, titles, and power; and for three years past hath been struck with a notion of founding a university at Bermuda, by a charter from the crown. He hath seduced several of the hopefullest young clergymen and others here, many of them well provided for, and all of them in the fairest way of preferment: but in England his conquests are greater, and I doubt will spread very far this winter. He shewed me a little tract which he designs to publish, and there your Excellency will see his whole scheme of a life academico-philosophical (I shall make you remember what you were) of a college founded for Indian scholars and missionaries, where he most exorbitantly proposeth a whole hundred pounds a year for himself, forty pounds for a fellow, and ten for a student. His heart will break if his deanery be not taken from him, and left to your Excellency's disposal. I discourage him by the coldness of courts and ministers, who will interpret all this as impossible and a vision; but nothing will do. And therefore I do humbly entreat your Excellency, either to use such persuasions as will keep one of the first men in this kingdom for learning and virtue quite at home, or assist him by your credit to compass his romantic design, which however is very noble and generous, and directly proper for a great person of your excellent education to encourage."

supposed to place the possessor in a very fair point of view for attracting the notice of his superiors both in the church and state.

Dr. Berkeley, however, was not so ill acquainted with the world as to rest the success of his application to the ministry entirely on the hope his scheme afforded of promoting national honour and the cause of Christianity: his arguments were drawn from the more alluring topic of present advantage to the government. Having with much industry acquired an accurate knowledge of the value of certain lands* in the island of St. Christopher's, yielded by France to Great Britain at the treaty of Utrecht, which were then to be sold for the public use, he undertook to raise from them a much greater sum than was expected, and proposed that a part of the purchase money should be applied to the erecting of his college. He found means, by the assistance of a Venetian of distinction, the Abbé Gualteri (or Altieri), with whom he had formed an acquaintance in Italy, to carry this proposal directly to King George I.† who laid his commands on Sir Robert Walpole to introduce and conduct it through the House of Commons. His Majesty was further pleased to grant a charter for erecting a college, by the name of St. Paul's college, in Bermuda, to consist of a president and nine fellows, who were obliged to maintain and educate Indian

* *Certain lands in St. Christopher's.*] "The island of St. Christopher's," saith Anderson, History of Commerce, vol. ii. "having been settled on the very same day and year by both England and France, A. D. 1625, was divided equally between the two nations. The English were twice driven out from thence by the French, and as often repossessed themselves of it. But at length, in the year 1702, General Coddrington, governor of the Leeward islands, upon advice received that war was declared by England against France, attacked the French part of the island, and mastered it with very little trouble; ever since which time that fine island has been solely possessed by Great Britain, having been formerly conceded to us by the treaty of Utrecht." The lands, therefore, which had belonged to the French planters, by this cession became the property of his Britannic Majesty. The first proposals for purchasing these lands were made to the Lords of Trade in 1717; see Journal of the British Commons. After which the affair seems to have been forgotten, till it was mentioned by Berkeley to Sir Robert Walpole in 1726.

† *To King George I.*] It was the custom of this Prince to unbend his mind in the evening by collecting together a company of philosophical foreigners, who discoursed in an easy and familiar manner with each other, entirely unrestrained by the presence of his Majesty, who generally walked about, or sat in a retired part of the chamber. One of this select company was Altieri; and this gave him an opportunity of laying his friend's proposal before the King.

scholars at the rate of 10*l.* per annum for each. The first president, Dr. George Berkeley, and first three fellows named in the charter (being the gentlemen abovementioned), were licensed to hold their preferments in these kingdoms till the expiration of one year and a half after their arrival in Bermuda. The Commons, May 11, 1726, voted, "That an humble address be presented to his Majesty, that out of the lands in St. Christopher's, yielded by France to Great Britain by the treaty of Utrecht, his Majesty would be graciously pleased to make such grant for the use of the president and fellows of the college of St. Paul, in Bermuda, as his Majesty shall think proper." The sum of 20,000*l.* was accordingly promised by the minister, and several private subscriptions were immediately raised for promoting "so pious an undertaking," as it is styled in the King's answer* to this address. Such a prospect of success in the favourite object of his heart drew from our author a beautiful copy of verses †, in which another age, perhaps, will acknowledge the old conjunction of the prophetic character with that of the poet to have again taken place.

In the mean time the Dean entered into a marriage, August 1, 1728, with Anne, the eldest daughter of the right honourable John Forster, speaker of the Irish House of Commons. This engagement, however, was so far from being any obstruction to his grand undertaking, that he actually set sail in the execution of it, for Rhode island, about the middle of September following. He carried with him his lady, a Miss Handcock, Mr. Smilert, an ingenious painter, two gentlemen of fortune, Mess. James and Dalton, a pretty large sum of money, of his own property, and a collection of books, for the use of his intended library. He directed his course to Rhode island, which lay nearest to Bermuda, with a view of purchasing lands on the adjoining continent, as estates for the support of his college; having a positive promise from those in power, that the parliamentary grant should be paid him as soon as ever such lands should be pitched upon and agreed for. The Dean took up his residence at Newport, in Rhode island, where his presence was a great relief to a clergyman of the church of England, established in those parts, as he preached every Sunday, and was indefatigable in pastoral labours during the whole time of his stay there, which was near two years.

* Commons' Journal, May 16, 1726.

† See Verses (vol. ii.) subjoined to Proposal for planting churches, &c.

When estates had been agreed for, it was fully expected that the public money would, according to grant, be immediately paid as the purchase of them. But the minister had never heartily embraced the project, and parliamentary influence had by this time interposed, in order to divert the grant into another channel. The sale of the lands in St. Christopher's, it was found, would produce 90,000*l.* Of this sum 80,000*l.* * was destined to pay the marriage portion of the Princess Royal, on her nuptials with the Prince of Orange: the remainder General Oglethorpe † had interest enough in parliament to obtain for the purpose of carrying over and settling foreign and other protestants in his new colony of Georgia, in America. The project, indeed, of the trustees for establishing this colony appears to have been equally humane and disinterested; but it is much to be lamented, that it should interfere with another of more extensive and lasting utility; which, if it had taken effect by the education of the youth of New England and other colonies, we may venture with great appearance of reason to affirm, would have planted such principles of religion and loyalty among them, as might have gone a good way towards preventing the present unhappy troubles in that part of the world. But to proceed:

After having received various excuses, Bishop Gibson, at that time bishop of London (in whose diocess all the West Indies are included), applying to Sir Robert Walpole, then at the head of the treasury, was favoured at length with the following very honest answer: "If you put this question to me," says Sir Robert, "as a minister, I must, and can assure you, that the money shall most undoubtedly be paid as soon as suits with public convenience: but if you ask me as a friend, whether Dean Berkeley should continue in America, expecting the payment of 20,000*l.* I advise him by all means to return home to Europe, and to give up his present expectations." The Dean being informed of this conference by his good friend the Bishop, and thereby fully convinced that the bad policy of one great man had rendered abortive a scheme whereon he had expended much of his private fortune, and more than seven years of the prime of his life, returned to Europe. Before he left Rhode island, he distributed what books he had brought with him among the clergy of that province; and immediately after his arrival in London, he returned

* Commons' Journal, May 10, 1733.

† Ibid. The General paid Dean B. the compliment of asking his consent to this application of the money before he moved for it in parliament.

all the private subscriptions that had been advanced for the support of his undertaking.

In February 1732, he preached before the Society for the Propagation of the Gospel in Foreign Parts a sermon, since printed at their desire; wherein, from his own knowledge of the state of religion in America, he offers many useful hints towards promoting the noble purposes for which that society was founded.

The same year, he gave a more conspicuous proof that he had not mispent the time he had been confined on the other side of the Atlantic, by producing to the world *The Minute Philosopher*, a masterly performance, wherein he pursues the freethinker through the various characters of atheist, libertine, enthusiast, scorner, critic, metaphysician, fatalist, and sceptic; and very happily employs against him several new weapons, drawn from the storehouse of his own ingenious system of philosophy. It is written in a series of dialogues on the model of Plato, a philosopher whom he studied particularly, and whose manner he is thought to have copied with more success than any other that ever attempted to imitate him.

We have already related by what means, and upon what occasion, Dr. Berkeley had first the honour of being known to Queen Caroline. This Princess delighted much in attending to philosophical conversations between learned and ingenious men; for which purpose she had, when princess of Wales, appointed a particular day in the week, when the most eminent for literary abilities at that time in England were invited to attend her Royal Highness in the evening: a practice which she continued after her accession to the throne. Of this company were Doctors Clarke, Hoadley, Berkeley, and Sherlock. Clarke and Berkeley were generally considered as principals in the debates that arose upon those occasions; and Hoadley adhered to the former, as Sherlock did to the latter. Hoadley was no friend to our Author: he affected to consider his philosophy and his Bermuda project as the reveries of a visionary. Sherlock (who was afterwards bishop of London) on the other hand, warmly espoused his cause; and particularly, when the Minute Philosopher came out, he carried a copy of it to the Queen, and left it to her Majesty to determine, whether such a work could be the production of a disordered understanding.

After Dean Berkeley's return from Rhode island, the Queen often commanded his attendance to discourse with him on what he had observed worthy of notice in America. His agreeable

and instructive conversation engaged that discerning Princess so much in his favour, that the rich deanery of Down, in Ireland, falling vacant, he was at her desire named to it, and the King's letter actually came over for his appointment. But his friend Lord Burlington having neglected to notify the royal intentions in proper time to the Duke of Dorset, then lord lieutenant of Ireland, his Excellency was so offended at this disposal of the richest deanery in Ireland without his concurrence, that it was thought proper not to press the matter any further. Her Majesty upon this declared, that since they would not suffer Dr. Berkeley to be a *dean* in Ireland, he should be a *bishop*: and accordingly, in 1734, the bishoprick of Cloyne becoming vacant, he was by letters patent, dated March 17, promoted to that see, and was consecrated at St. Paul's church in Dublin, on the 19th of May following, by Theophilus, archbishop of Cashel, assisted by the Bishops of Raphoe and Killaloe.

His Lordship repaired immediately to his manse-house at Cloyne, where he constantly resided (except one winter that he attended the business of parliament in Dublin) and applied himself with vigour to the faithful discharge of all episcopal duties. He revived in his diocess the useful office of rural dean, which had gone into disuse; visited frequently parochially; and confirmed in the several parts of his see.

He continued his studies, however, with unabated attention; and about this time engaged in a controversy with the mathematicians of Great Britain and Ireland, which made a good deal of noise in the literary world. The occasion was this: Mr. Addison had given the Bishop an account of their common friend Dr. Garth's behaviour in his last illness, which was equally unpleasing to both those excellent advocates for revealed religion. For when Mr. Addison went to see the Doctor, and began to discourse with him seriously about preparing for his approaching dissolution, the other made answer, "Surely, Addison, I have good reason not to believe those trifles, since my friend Dr. Halley, who has dealt so much in demonstration, has assured me, that the doctrines of Christianity are incomprehensible, and the religion itself an imposture." The Bishop therefore took arms against this redoubtable dealer in demonstration, and addressed *The Analyst* to him, with a view of shewing, that mysteries in faith were unjustly objected to by mathematicians, who admitted much greater mysteries, and even falsehoods, in science, of which he endeavoured to prove that the doctrine of

fluxions furnished an eminent example. Such an attack upon what had hitherto been looked upon as impregnable, produced a number of warm answers, to which the Bishop replied once or twice.

From this controversy he turned his thoughts to subjects of more apparent utility; and his *Queries* proposed for the good of Ireland, first printed in 1735, his *Discourse addressed to Magistrates*,* which came out the year following, and his *Maxims concerning Patriotism*, published in 1750, are equally monuments of his knowledge of mankind, and of his zeal for the service of true religion and his country.

In 1745, during the Scots rebellion, his Lordship addressed *A Letter to the Roman Catholics* of his diocess; and in 1749, another to the clergy of that persuasion in Ireland, under the title of *A Word to the Wise*, written with so much candour and moderation, as well as good sense, that those gentlemen, highly to their own honour, in the Dublin Journal of November 18, 1749, thought fit to return "their sincere and hearty thanks to the worthy Author; assuring him, that they are determined to comply with every particular recommended in his address, to the utmost of their power." They add, that in "every page it contains a proof of the Author's extensive charity; his views are only towards the public good; the means he prescribeth are easily complied with; and his manner of treating persons in their circumstances so very singular, that they plainly shew the good man, the polite gentleman, and the true patriot." A character this, which was so entirely his Lordship's due, that in the year 1745, that excellent judge of merit, and real friend to Ireland, the late Lord Chesterfield, as soon as he was advanced to the government, of his own motion wrote to inform him, that the see of Clogher, then vacant, the value of which was double that of Cloyne, was at his service. This offer our Bishop, with many expressions of thankfulness, declined. He had enough already to satisfy all his wishes; and agreeably to the natural warmth of his temper, he had conceived so high an idea of the beauties of Cloyne, that Mr. Pope had once almost determined to make a visit to Ireland on purpose to see a place which his friend had painted out to him with all the brilliancy of colouring, and

* Occasioned by an impious society called *Blasters*, which this pamphlet put a stop to. He expressed his sentiments on the same occasion in the House of Lords, the only time he ever spoke there. The speech was received with much applause.

which yet to common eyes presents nothing that is very worthy of attention.

The close of a life thus devoted to the good of mankind was answerable to the beginning of it; the Bishop's last years being employed in inquiring into the virtues of a medicine, whereof he had himself experienced the good effects in the relief of a nervous cholic, brought on him by his sedentary course of living, and grown to that height, that, in his own words, "it rendered life a burden to him, the more so, as his pains were exasperated by exercise." This medicine was no other than the celebrated tar-water; his thoughts upon which subject he first communicated to the world in the year 1744, in a treatise entitled *Siris, a Chain of Philosophical Reflections and Enquiries concerning the Virtues of Tar-water.* The Author has been heard to declare, that this work cost him more time and pains than any other he had ever been engaged in; a circumstance that will not appear surprising to such as shall give themselves the trouble of examining into the extent of erudition that is there displayed. It is indeed a chain, which, like that of the poet, reaches from earth to heaven, conducting the reader by an almost imperceptible gradation from the phenomena of tar-water, through the depths of the ancient philosophy, to the sublimest mystery of the Christian religion. It underwent a second impression in 1747, and was followed by *Farther Thoughts on Tar-water*, published in 1752. This was his last performance for the press, and he survived it but a short time.

In July 1752, he removed, though * in a bad state of health, with his lady and family to Oxford, in order to superintend the education of one † of his sons, then newly admitted a student

* He was carried from his landing on the English shore in a horse litter to Oxford.

† This gentleman, George Berkeley, second son of the Bishop, proceeded A. M. January 26, 1759, took holy orders, and in August following was presented to the vicarage of Bray, in Berkshire. The late Archbishop Secker, who had a high respect for the father's character, honoured the son with his patronage and friendship, both at the university and afterwards. By his favour Dr. Berkeley possessed a canonry of Canterbury, the chancellorship of the collegiate church of Brecknock, and (by exchange for the vicarage of Bray) the vicarage of Cookham, Berks: to which was added by the Dean and Chapter of Canterbury, the vicarage of East Peckham, Kent. He took the degree of LL. D. February 12, 1768. In the year 1760, he married the daughter of the Rev. Mr. Frinsham, rector of White-Waltham, Berks, and by this lady had issue two sons.

at Christ-church. He had taken a fixed resolution to spend the remainder of his days in this city, with a view of indulging the passion for a learned retirement, which had ever strongly possessed his mind, and was one of the motives that led him to form his Bermuda project. But as nobody could be more sensible than his Lordship of the impropriety of a bishop's non-residence, he previously endeavoured to exchange his high preferment for some canonry or headship at Oxford. Failing of success in this, he actually wrote over to the Secretary of State, to request that he might have permission to resign his bishoprick, worth at that time at least 1400*l.* per annum. So uncommon a petition excited his Majesty's curiosity to inquire who was the extraordinary man that preferred it; being told that it was his old acquaintance Dr. Berkeley, he declared that he should die a bishop in spite of himself, but gave him full liberty to reside where he pleased.

The Bishop's last act before he left Cloyne was to sign a lease of the demesne lands in that neighbourhood, to be renewed yearly at the rent of 200*l.* which sum he directed to be distributed every year, until his return, among poor housekeepers of Cloyne, Youghal, and Aghadda.

At Oxford he lived highly respected by the learned members of that great university, till the hand of Providence unexpectedly deprived them of the pleasure and advantage derived from his residence among them. On Sunday evening, January 14, 1753, as he was sitting in the midst of his family, listening to a sermon of Dr. Sherlock's, which his lady was reading to him, he was seized with what the physicians termed a palsy in the heart, and instantly expired. The accident was so sudden, that his body was quite cold and his joints stiff, before it was discovered; as the Bishop lay on a couch, and seemed to be asleep, till his daughter, on presenting him with a dish of tea, first perceived his insensibility. His remains were interred at Christ-church, Oxford, where there is an elegant marble monument, erected to his memory by his lady, who had, during her marriage, brought him three sons and one daughter.

As to his person, he was a handsome man, with a countenance full of meaning and benignity, remarkable for great strength of limbs, and, till his sedentary life impaired it, of a very robust constitution. He was, however, often troubled with the hypochondria, and latterly with that nervous cholic mentioned above.

At Cloyne he constantly rose between three and four o'clock in the morning, and summoned his family to a lesson on the base-

viol, from an Italian master he kept in the house for the instruction of his children; though the Bishop himself had no ear for music. He spent the rest of the morning, and often a great part of the day, in study: his favourite author, from whom many of his notions were borrowed, was Plato. He had a large and valuable collection of books and pictures, which are now the property of his son, the Rev. George Berkeley, LL. D.

The excellence of his moral character, if it were not so conspicuous in his writings, might be learned from the blessings with which his memory is followed by the numerous poor * of his neighbourhood, as well as from the testimony of his yet-surviving acquaintance, who cannot to this day speak of him without a degree of enthusiasm, that removes the air of hyperbole from the well-known line of his friend Mr. Pope:

"To Berkeley every virtue under heaven."

The inscription on his monument was drawn up by Dr. Markham, afterwards archbishop of York, then head master of Westminster-school, and is in these terms:

Gravissimo præsuli,
Georgio, Episcopo Clonensi:
Viro,
Seu ingenii et eruditionis laudem,
Seu probitatis et beneficentiæ spectemus,
Inter primos omnium ætatum numerando.
Si Christianus fueris,
Si amans patriæ,
Utroque nomine gloriari potes
BERKLEIUM vixisse.
Obiit annum agens septuagesimum tertium †:
Natus Anno Christi M.DC.LXXIX.
Anna Conjux
L. M. P.

* *By the poor of his neighbourhood.*] One instance of his attention to his poor neighbours may deserve relating. Cloyne, though it gives name to the see, is in fact no better than a village: it is not reasonable, therefore, to expect much industry or ingenuity in the inhabitants. Yet whatever article of clothing they could possibly manufacture there, the Bishop would have from no other place; and chose to wear ill clothes, and worse wigs, rather than suffer the poor of the town to remain unemployed.

† Mistake.

LETTERS.

LETTER I.

To Mr. Thomas Prior,* *Pall-mall Coffee-house, London.*

DEAR TOM, Paris, Nov. 25, 1713, (N. S.)

From London to Calais I came in the company of a Flamand, a Spaniard, a Frenchman, and three English servants of

* Thomas Prior, Esq. the gentleman to whom the public is indebted for preserving the greatest part of the following correspondence, was born about the year 1679, at Rathdowney, in the Queen's County, the estate of his family since the middle of that century. He was educated in the university of Dublin, where he took the degree of A. M. and was fellow-student with our Author. Being of a weak habit of body, he declined entering into any of the learned professions, though otherwise well qualified to have appeared with advantage in them: the great object of his thoughts and studies was to promote the real happiness of his country. In 1729 he published his well-known tract, *A List of the Absentees of Ireland,* in the close of which he strongly recommended the use of linen scarfs at funerals. The hint was adopted by the executors of Mr. Conolly, speaker of the House of Commons, at his public funeral in the month of October of this year; and that mode of burying has been effectually established ever since, to the great emolument of our most capital branch of trade. He published also several tracts relative to our coin, linen, manufacture, &c. But the glory of his life, and object of his unremitting labours, was the founding and promoting of that most useful institution the Dublin Society, of which for a series of years he discharged the duty of secretary. Every good and great man, his contemporary, honoured him with his esteem and friendship, particularly Philip earl of Chesterfield; of whose interest however his moderation led him to make no other use than to procure, by his Lordship's recommendation, from the late King a charter of incorporation for his darling child the Dublin Society, with a grant of 500*l.* per annum for its better support. Having spent his life in the practice of every virtue that distinguishes the patriot and the true Christian, he died of a gradual decline in Dublin, October 21, 1751, and was interred in the church of Rathdowney. Over his remains is a neat monument of Kilkenny marble, with an English epitaph: his friends have erected a more magnificent memorial of this useful member of society in the nave of Christ-church, Dublin, the inscription on which came from the elegant pen of our Bishop, and will appear below. *See Views and Descriptions of Dublin, by Pool and Cash,* p. 102.

my Lord. The three gentlemen being of those different nations obliged me to speak the French language (which is now familiar), and gave me the opportunity of seeing much of the world in a little compass. After a very remarkable escape from rocks and banks of sand, and darkness and storm, and the hazards that attend rash and ignorant seamen, we arrived at Calais in a vessel, which returning the next day was cast away in the harbour in open day-light, as I think I already told you. From Calais Col. Du Hamel left it to my choice either to go with him by post to Paris, or come after in the stage-coach. I chose the latter, and on Nov. 1 (O. S.) embarked in the stage-coach with a company that were all perfect strangers to me. There were two Scotch and one English gentleman. One of the former happened to be the author of the Voyage to St. Kilda and the Account of the Western Isles. We were good company on the road, and that day sennight came to Paris. I have been since taken up in viewing churches, convents, palaces, colleges, &c. which are very numerous and magnificent in this town. The splendour and riches of these things surpass belief: but it were endless to descend to particulars. I was present at a disputation in the Sorbonne, which indeed had much of the French fire in it. I saw the Irish and the English colleges. In the latter I saw, enclosed in a coffin, the body of the late King James. Bits of the coffin and of the cloth that hangs the room have been cut away for relics, he being esteemed a great saint by the people. The day after I came to town I dined at the Ambassador of Sicily's, and this day with Mr. Prior. I snatched an opportunity to mention you to him, and do your character justice. To-morrow I intend to visit Father Mallebranche, and discourse him on certain points. I have some reasons to decline speaking of the country or villages that I saw as I came along.

My Lord is just now arrived, and tells me he has an opportunity of sending my letters to my friends to-morrow morning, which occasions my writing this. My humble service to Sir John Rawdon, Mrs. Rawdon, Mrs. Kempsy, and all other friends. My Lord thinks he shall stay a fortnight here. I am, dear Tom,

Your affectionate humble servant,

G. Berkeley.

LETTER II.

DEAR TOM, Turin, Jan. 6, 1714, (N. S.)

At Lyons, where I was about eight days, it was left to my choice whether I would go from thence to Toulon, and there embark for Genoa; or else pass through Savoy, cross the Alps, and so through Italy. I chose the latter route, though I was obliged to ride post in company of Col. Du Hamel and Mr. Oglethorpe, adjutant-general of the Queen's forces, who were sent with a letter from my Lord to the King's mother at Turin. The first day we rode from Lyons to Chambery, the capital of Savoy, which is reckoned sixty miles. The Lionnois and Dauphiné were very well; but Savoy was a perpetual chain of rocks and mountains almost impassable for ice and snow. And yet I rode post through it, and came off with only four falls, from which I received no other damage than the breaking my sword, my watch, and my snuff-box. On new year's day we passed Mount Cenis, one of the most difficult and formidable parts of the Alps which is ever past over by mortal men. We were carried in open chairs by men used to scale these rocks and precipices, which at this season are more slippery and dangerous than at other times, and at the best are high, craggy, and steep enough to cause the heart of the most valiant man to melt within him. My life often depended on a single step. No one will think that I exaggerate, who considers what it is to pass the Alps on new year's day. But I shall leave particulars to be recited by the fire-side.

We have been now five days here, and in two or three more design to set forward towards Genoa, where we are to join my Lord, who embarked at Toulon. I am now hardened against wind and weather, earth and sea, frost and snow; can gallop all day long, and sleep but three or four hours at night.

The court here is polite and splendid, the city beautiful, the churches and colleges magnificent, but not much learning stirring among them. However, all orders of people, clergy and laity, are wonderfully civil; and every where a man finds his account in being an Englishman, that character alone being sufficient to gain respect. My service to all friends, particularly to Sir John and Mrs. Rawdon, and Mrs. Kempsy. It is my advice that they do not pass the Alps in their way to Sicily. I am, dear Tom, Yours, &c.

G. B.

LETTER III.

DEAR TOM, Leghorn, Feb. 26, 1714, (N. S.)

MRS. RAWDON is too thin, and Sir John too fat, to agree with the English climate: I advise them to make haste, and transport themselves into this warm, clear air. Your best way is to come through France; but make no long stay there, for the air is too cold, and there are instances enough of poverty and distress to spoil the mirth of any one who feels the sufferings of his fellow-creatures. I would prescribe you two or three operas at Paris, and as many days amusement at Versailles. My next recipe shall be to ride post from Paris to Toulon, and there to embark for Genoa. For I would by no means have you shaken to pieces, as I was, riding post over the rocks of Savoy, or put out of humour by the most horrible precipices of Mount Cenis, that part of the Alps which divides Piedmont from Savoy. I shall not anticipate your pleasure by any description of Italy or France. Only, with regard to the latter, I cannot help observing, that the Jacobites have little to hope, and others little to fear, from that reduced nation. The King indeed looks as though he wanted neither meat nor drink, and his palaces are in good repair: but throughout the land there is a different face of things.

I stayed about a month at Paris, eight days at Lyons, eleven at Turin, three weeks at Genoa, and am now here about a fortnight, with my Lord's Secretary (an Italian), and some others of his retinue; my Lord having gone aboard a Maltese vessel from hence to Sicily with a couple of servants. He designs to stay there incognito a few days, and then return hither; having put off his public entry till the yacht with his equipage arrives.

I have writ to you several times before by post: in answer to all my letters I desire you to send me one great one, close writ and filled on all sides, containing a particular account of all transactions in London and Dublin. Enclose it in a cover to my Lord ambassador, and that again in another cover to Mr. Hare, at my Lord Bolingbroke's office. If you have a mind to travel only in the map, here is the list of all the places where I lodged since my leaving England, in their natural order: Calais, Boulogne, Montreuil, Abbeville, Pois, Beauvais, Paris, Moret, Villeneuve-le-Roi, Vermanton, Saulieu, Chany, Macon, Lyons, Chambery, St. Jean-de-Maurienne, Lanebourg, Susa, Turin, Alexandria, Campo-Marone, Genoa, Sestri-di-Levante, Lerici,

Leghorn. My humble service to Sir John, Mrs. Rawdon, and Mrs. Kempsy, Mr. Digby, Mr. French, &c. I am, dear Tom,

Your affectionate humble servant,

G. BERKELEY.

LETTER IV.

To Mr. POPE.

Leghorn, May 1, 1714.

As I take ingratitude to be a greater crime than impertinence, I choose rather to run the risk of being thought guilty of the latter, than not to return you my thanks for a very agreeable entertainment you just now gave me. I have accidentally met with your Rape of the Lock here, having never seen it before. Style, painting, judgment, spirit, I had already admired in other of your writings; but in this I am charmed with the magic of your invention, with all those images, allusions, and inexplicable beauties, which you raise so surprisingly, and at the same time so naturally, out of a trifle. And yet I cannot say that I was more pleased with the reading of it, than I am with the pretext it gives me to renew in your thoughts the remembrance of one who values no happiness beyond the friendship of men of wit, learning, and good-nature.

I remember to have heard you mention some half-formed design of coming to Italy. What might we not expect from a muse that sings so well in the bleak climate of England, if she felt the same warm sun, and breathed the same air with Virgil and Horace!

There are here an incredible number of poets that have all the inclination, but want the genius, or perhaps the art of the ancients. Some among them who understand English, begin to relish our authors; and I am informed that at Florence they have translated Milton into Italian verse. If one who knows so well how to write like the old Latin poets came among them, it would probably be a means to retrieve them from their cold trivial conceits, to an imitation of their predecessors.

As merchants, antiquaries, men of pleasure, &c. have all different views in travelling, I know not whether it might not be worth a poet's while to travel, in order to store his mind with strong images of nature.

Green fields and groves, flowery meadows and purling streams,

are no where in such perfection as in England: but if you would know lightsome days, warm suns, and blue skies, you must come to Italy; and to enable a man to describe rocks and precipices, it is absolutely necessary that he pass the Alps.

You will easily perceive that it is self-interest makes me so fond of giving advice to one who has no need of it. If you came into these parts, I should fly to see you. I am here (by the favour of my good friend the Dean of St. Patrick's) in quality of chaplain to the Earl of Peterborough, who about three months since left the greatest part of his family in this town. God knows how long we shall stay here. I am, Your, &c.

LETTER V.

Naples, Oct. 22, 1717, (N. S.)

I HAVE long had it in my thoughts to trouble you with a letter, but was discouraged for want of something that I could think worth sending fifteen hundred miles. Italy is such an exhausted subject, that I dare say you would easily forgive my saying nothing of it: and the imagination of a poet is a thing so nice and delicate, that it is no easy matter to find out images capable of giving pleasure to one of the few, who (in any age) have come up to that character. I am nevertheless lately returned from an island, where I passed three or four months; which, were it set out in its true colours, might, methinks, amuse you agreeably enough for a minute or two. The island Inarime is an epitome of the whole earth, containing within the compass of eighteen miles a wonderful variety of hills, vales, ragged rocks, fruitful plains, and barren mountains, all thrown together in a most romantic confusion. The air is in the hottest season constantly refreshed by cool breezes from the sea. The vales produce excellent wheat and Indian corn, but are mostly covered with vineyards, intermixed with fruit-trees: besides the common kinds, as cherries, apricots, peaches, &c. they produce oranges, limes, almonds, pomegranates, figs, water-melons, and many other fruits unknown to our climates, which lie every where open to the passenger. The hills are the greater part covered to the top with vines, some with chestnut-groves, and others with thickets of myrtle and lentiscus. The fields in the northern side are divided by hedge-rows of myrtle. Several fountains and rivulets add to the beauty of this landscape, which is likewise set off by the variety

of some barren spots and naked rocks. But that which crowns the scene is a large mountain, rising out of the middle of the island (once a terrible volcano, by the ancients called Mons Epomeus): its lower parts are adorned with vines and other fruits; the middle affords pasture to flocks of goats and sheep; and the top is a sandy pointed rock, from which you have the finest prospect in the world, surveying at one view, besides several pleasant islands lying at your feet, a tract of Italy about three hundred miles in length, from the promontory of Antium to the cape of Palinurus: the greater part of which hath been sung by Homer and Virgil, as making a considerable part of the travels and adventures of their two heroes. The islands Caprea, Prochyta, and Parthenope, together with Cajeta, Cumæ, Monte Miseno, the habitations of Circe, the Syrens, and the Læstrigones, the bay of Naples, the promontory of Minerva, and the whole Campagna Felice, make but a part of this noble landscape; which would demand an imagination as warm, and numbers as flowing as your own, to describe it. The inhabitants of this delicious isle, as they are without riches and honours, so they are without the vices and follies that attend them; and were they but as much strangers to revenge as they are to avarice and ambition, they might in fact answer the poetical notions of the golden age. But they have got, as an alloy to their happiness, an ill habit of murdering one another on slight offences. We had an instance of this the second night after our arrival, a youth of eighteen being shot dead by our door: and yet by the sole secret of minding our own business, we found a means of living securely among these dangerous people.

Would you know how we pass the time at Naples? Our chief entertainment is the devotion of our neighbours: besides the gaiety of their churches (where folks go to see what they call *una bella devotione*, i. e. a sort of religious opera) they make fire-works almost every week out of devotion; the streets are often hung with arras, out of devotion, and (what is still more strange) the ladies invite gentlemen to their houses, and treat them with music and sweetmeats, out of devotion: in a word, were it not for this devotion of its inhabitants, Naples would have little else to recommend it beside the air and situation. Learning is in no very thriving state here, as indeed no where else in Italy: however, among many pretenders some men of taste are to be met with. A friend of mine told me not long since, that being to visit Salvini at Florence, he found him reading your Homer: he liked

the notes extremely, and could find no other fault with the version, but that he thought it approached too near a paraphrase; which shews him not to be sufficiently acquainted with our language. I wish you health to go on with that noble work; and when you have that, I need not wish you success. You will do me the justice to believe, that whatever relates to your welfare is sincerely wished by, Yours, &c.

LETTER VI.

To Dr. Arbuthnot.

April 17, 1717.

With much difficulty I reached the top of Mount Vesuvius, in which I saw a vast aperture full of smoke, which hindered the seeing its depth and figure. I heard within that horrid gulf certain odd sounds, which seemed to proceed from the belly of the mountain; a sort of murmuring, sighing, throbbing, churning, dashing (as it were) of waves, and between whiles a noise like that of thunder or cannon, which was constantly attended with a clattering like that of tiles falling from the tops of houses on the streets. Sometimes, as the wind changed, the smoke grew thinner, discovering a very ruddy flame, and the jaws of the pan or crater streaked with red and several shades of yellow. After an hour's stay the smoke, being moved by the wind, gave us short and partial prospects of the great hollow, in the flat bottom of which I could discern two furnaces almost contiguous: that on the left, seeming about three yards in diameter, glowed with red flame, and threw up red-hot stones with a hideous noise, which, as they fell back, caused the fore-mentioned clattering. May 8, in the morning, I ascended to the top of Vesuvius a second time, and found a different face of things. The smoke ascending upright gave a full prospect of the crater, which, as I could judge, is about a mile in circumference, and a hundred yards deep. A conical mount had been formed since my last visit, in the middle of the bottom: this mount, I could see, was made of the stones thrown up and fallen back again into the crater. In this new hill remained the two mounts or furnaces already mentioned: that on our left was in the vertex of the hill which it had formed round it, and raged more violently than before, throwing up every three or four minutes with a dreadful bellowing a vast number of red-hot stones, sometimes in appearance above a thousand, and at

least three thousand feet higher than my head as I stood upon the brink: but there being little or no wind, they fell back perpendicularly into the crater, increasing the conical hill. The other mouth to the right was lower in the side of the same new-formed hill; I could discern it to be filled with red-hot liquid matter, like that in the furnace of a glass-house, which raged and wrought as the waves of the sea, causing a short abrupt noise like what may be imagined to proceed from a sea of quicksilver dashing among uneven rocks. This stuff would sometimes spew over and run down the convex side of the conical hill; and appearing at first red-hot it changed colour, and hardened as it cooled, shewing the first rudiments of an eruption, or if I may say so, an eruption in miniature. Had the wind driven in our faces, we had been in no small danger of stifling by the sulphureous smoke, or being knocked on the head by lumps of molten minerals, which we saw had sometimes fallen on the brink of the crater, upon those shots from the gulf at bottom. But as the wind was favourable, I had an opportunity to survey this odd scene for above an hour and a half together; during which it was very observable, that all the volleys of smoke, flame, and burning stones, came only out of the hole to our left, while the liquid stuff in the other mouth wrought and overflowed as hath been already described. June 5, after a horrid noise, the mountain was seen at Naples to spew a little out of the crater. The same continued the 6th. The 7th, nothing was observed till within two hours of night, when it began a hideous bellowing, which continued all that night and the next day till noon, causing the windows, and as some affirm, the very houses, in Naples to shake. From that time it spewed vast quantities of molten stuff to the south, which streamed down the side of the mountain like a great pot boiling over. This evening I returned from a voyage through Apulia, and was surprised, passing by the north side of the mountain, to see a great quantity of ruddy smoke lie along a huge tract of sky over the river of molten stuff, which was itself out of sight. The 9th, Vesuvius raged less violently: that night we saw from Naples a column of fire shoot between whiles out of its summit. The 10th, when we thought all would have been over, the mountain grew very outrageous again, roaring and groaning most dreadfully. You cannot form a juster idea of this noise in the most violent fits of it, than by imagining a mixed sound made up of the raging of a tempest, the murmur of a troubled sea, and the roaring of thunder and artillery, confused all together. It was very terrible, as

we heard it in the further end of Naples, at the distance of above twelve miles: this moved my curiosity to approach the mountain. Three or four of us got into a boat, and were set ashore at Torre del Greco, a town situate at the foot of Vesuvius to the south-west, whence we rode four or five miles before we came to the burning river, which was about midnight. The roaring of the volcano grew exceeding loud and horrible as we approached. I observed a mixture of colours in the cloud over the crater, green, yellow, red, and blue; there was likewise a ruddy dismal light in the air over that tract of land where the burning river flowed; ashes continually showered on us all the way from the sea-coast: all which circumstances, set off and augmented by the horror and silence of the night, made a scene the most uncommon and astonishing I ever saw, which grew still more extraordinary as we came nearer the stream. Imagine a vast torrent of liquid fire rolling from the top down the side of the mountain, and with irresistible fury bearing down, and consuming vines, olives, fig-trees, houses; in a word, every thing that stood in its way. This mighty flood divided into different channels, according to the inequalities of the mountain: the largest stream seemed half a mile broad at least, and five miles long. The nature and consistence of these burning torrents hath been described with so much exactness and truth by Borellus in his Latin treatise of Mount Ætna, that I need say nothing of it. I walked so far before my companions up the mountain, along the side of the river of fire, that I was obliged to retire in great haste, the sulphureous stream having surprised me, and almost taken away my breath. During our return, which was about three o'clock in the morning, we constantly heard the murmur and groaning of the mountain, which between-whiles would burst out into louder peals, throwing up huge spouts of fire and burning stones, which falling down again, resembled the stars in our rockets. Sometimes I observed two, at others three distinct columns of flames; and sometimes one vast one that seemed to fill the whole crater. These burning columns and the fiery stones seemed to be shot one thousand feet perpendicular above the summit of the volcano. The 11th at night, I observed it, from a terrace in Naples, to throw up incessantly a vast body of fire, and great stones, to a surprising height. The 12th in the morning it darkened the sun with ashes and smoke, causing a sort of eclipse. Horrid bellowings, this and the foregoing day, were heard at Naples, whither part of the ashes also reached: at night I observed it throwing up flame, as on the

11th. On the 13th, the wind changing, we saw a pillar of black smoke shot upright to a prodigious height: at night I observed the mount cast up fire as before, though not so distinctly because of the smoke. The 14th, a thick black cloud hid the mountain from Naples. The 15th in the morning, the court and walls of our house in Naples were covered with ashes. The 16th, the smoke was driven by a westerly wind from the town to the opposite side of the mountain. The 17th, the smoke appeared much diminished, fat and greasy. The 18th, the whole appearance ended; the mountain remaining perfectly quiet, without any visible smoke or flame. A gentleman of my acquaintance, whose window looked towards Vesuvius, assured me that he observed several flashes, as it were of lightning, issue out of the mouth of the volcano. It is not worth while to trouble you with the conjectures * I have formed concerning the cause of these phenomena, from what I observed in the Lacus Amsancti, the Solfatara, &c. as well as in Mount Vesuvius. One thing I may venture to say, that I saw the fluid matter rise out of the centre of the bottom of the crater, out of the very middle of the mountain, contrary to what Borellus imagines, whose method of explaining the eruption of a volcano by an inflexed syphon and the rules of hydrostatics, is likewise inconsistent with the torrent's flowing down from the very vertex of the mountain. I have not seen the crater since the eruption, but design to visit it again before I leave Naples. I doubt there is nothing in this worth shewing the Society: as to that, you will use your discretion.

E. (it should be G.) BERKELEY.

* Our Author's conjectures on the cause of the phenomena abovementioned do not appear in any of his writings; but he has often communicated them, in conversation, to his friends. He observed, that all the remarkable volcanos in the world were near the sea. It was his opinion, therefore, that a vacuum being made in the bowels of the earth by a vast body of inflammable matter taking fire, the water rushed in, and was converted into steam: which simple cause was sufficient to produce all the wonderful effects of volcanos; as appears from Savery's fire engine for raising water, and from the Æolipile.

The following extracts from letters to Mr. Thomas Prior, of Dublin, it is hoped, will not be unacceptable to the reader, as they serve to mark the progress of the Bermuda project, and of the Author's hopes and fears on that interesting occasion.

Extract 1.—London, Dec. 8, 1724. Dear Tom,—You wrote to me something or other which I received a fortnight ago, about temporal affairs, which I have no leisure to think of at present. The Lord Chancellor is not a busier man than myself; and I thank God my pains are not without success, which hitherto hath answered beyond expectation. Doubtless the English are a nation *très eclairée.* Let me know whether you have wrote to Mr. Newman whatever you judged might give him a good opinion of our project. Let me also know where Bermuda Jones lives, or where he is to be met with.

Ex. 2.—April 20, 1725. Pray give my service to Caldwell, and let him know that, in case he goes abroad with Mr. Stewart, Jaques, who lived with Mr. Ashe, is desirous to attend upon him. I have obtained reports from the Bishop of London, the Board of Trade and Plantations, and the Attorney and Solicitor General, in favour of the Bermuda scheme, and hope to have the warrant signed by his Majesty this week.

Ex. 3.—June 3, 1725. Yesterday the charter passed the privy seal. This day the new Chancellor began his office by putting the recipe to it.

Ex. 4.—June 12, 1725. The charter hath passed all the seals, and is now in my custody. It hath cost me one hundred and thirty pounds dry fees, beside expedition-money to men in office.

Ex. 5.—Sept. 3, 1725. I wrote long since to Caldwell about his going to Bermuda, but had no answer; which makes me think myletter miscarried. I must now desire you to give my service to him, and know whether he still retains the thoughts he once seemed to have of entering into that design. I know he hath since got an employment, &c. but I have good reason to think he would not suffer in his temporalities by taking one of our fellowships, although he resigned all that. In plain English, I have good assurance that our college will be endowed beyond any thing expected or desired hitherto. This makes me confident he would lose nothing by the change, and on this supposition only I propose it to him. I wish he may judge rightly in this matter, as well for his own sake as for the sake of the college.

Ex. 6.—Jan. 27, 1726. I must once more entreat you, for the sake of old friendship, to pluck up a vigorous active spirit, and disencumber me of the affairs relating to the inheritance, by putting one way or other a final issue to them. I thank God I find, in matters of a more difficult nature, good effects of activity and resolution. I mean Bermuda, with which my hands are full, and which is in a fair way to thrive and flourish in spite of all opposition.

Ex. 7.—Feb. 6, 1726. I am in a fair way of having a very noble endowment for the college of Bermuda, though the late meeting of parliament, and the preparations of a fleet, &c. will delay the finishing things which depend in some measure on the parliament, and to which I have gained the consent of the government, and indeed of which I make no doubt; but only the delay, it is to be feared, will make it impossible for me to set out this spring. One good effect of this, I hope, may be, that you will have disembarrassed yourself of all sort of business that may detain you here, and so be ready to go with us: in which case I may have somewhat to propose to you, that I believe is of a kind agreeable to your inclinations, and may be of considerable advantage to you. But you must say nothing of this to any one, nor of any one thing that I have now hinted concerning endowment, delay, going, &c. I have heard lately from Caldwell, who wrote to me on an affair in which it will not be in my power to do him any service. I answered his letter, and mentioned somewhat about Bermuda, with an overture for his being fellow there. I desire you would discourse him, as from yourself, on that subject, and let me know his thoughts and dispositions towards engaging in that design.

Ex. 8.—March 15, 1726. I had once thought I should be able to have set out for Bermuda this season. But his Majesty's long stay abroad, the late meeting of parliament, and the present posture of foreign affairs taking up the thoughts both of ministers and parliament, have postponed the settling of certain lands in St. Christopher's on our college, so as to render the said thoughts abortive. I have now my hands full of that business, and hope to see it soon settled to my wish. In the mean time, my attendance on this business renders it impossible for me to mind my private affairs. Your assistance, therefore, in them, will not only be a kind service to me, but also to the public weal of our college, which would very much suffer if I were obliged to leave this kingdom before I saw an endowment settled on it. For this reason I must depend upon you.

Ex. 9.—April 19, 1726. Last Saturday I sent you the instrument empowering you to set my deanery. It is at present my opinion that matter had better be deferred till the charter of St. Paul's college hath got through the House of Commons, who are now considering it. In ten days at farthest I hope to let you know the event hereof, which, as it possibly may affect some circumstance in the farming my said deanery, is the occasion of giving you this trouble for the present, when I am in the greatest hurry of business I ever knew in my life, and have only time to add that I am, &c.

Ex. 10.—May 12, 1726. After six weeks' struggle against an earnest opposition from different interests and motives, I have yesterday carried my point just as I desired in the House of Commons by an extraordinary majority, none having the confidence to speak against it, and not above two giving their negatives, which was done in so low a voice as if they themselves were ashamed of it. They were both considerable men in stocks in trade, and in the city: and in truth I have had more opposition from that sort of men, and from the governors and traders to America, than from any others. But God be praised, there is an end of all their narrow and mercantile views and endeavours, as well as of the jealousies and suspicions of others (some whereof were very great men) who apprehended this college may produce an independency in America, or at least lessen its dependency upon England. Now I must tell you that you have nothing to do but go on with farming my deanery, &c. according to the tenor of my former letter, which I suspended by a subsequent one till I should see the event of yesterday.

Ex. 11.—Aug. 4, 1726. You mentioned a friend of Synge's, who was desirous to be one of our fellows. Pray let me know who he is, and the particulars of his character. There are many competitors more than vacancies, and the fellowships are likely to be very good ones: so I would willingly see them well bestowed.

Ex. 12.—Dec. 1, 1726. Bermuda is now on a better and surer foot than ever. After the address of the Commons, and his Majesty's most gracious answer, one would have thought all difficulties had been over. But much opposition hath been since raised (and that by very great men) to the design. As for the obstacles thrown in my way by interested men, though there hath been much of that, I never regarded it, no more than the clamours and calumnies of ignorant mistaken people: but in good

truth it was with much difficulty, and the peculiar blessing of God, that the point was carried maugre the strong opposition in the cabinet council; wherein nevertheless it hath of late been determined to go on with the grant pursuant to the address of the House of Commons, and to give it all possible dispatch. Accordingly his Majesty hath ordered the warrant for passing the said grant to be drawn. The persons appointed to contrive the draught of the warrant are, the Solicitor General, Baron Scroop of the treasury, and my very good friend Mr. Hutcheson. You must know that, in July last, the lords of the treasury had named commissioners for taking an estimate of the value and quantity of the crown-lands in St. Christopher's, and for receiving proposals either for selling or farming the same for the benefit of the public. Their report is not yet made; and the treasury were of opinion they could not make a grant to us till such time as the whole were sold or farmed pursuant to such report. But the point I am now labouring is, to have it done without delay. And how this may be done without embarrassing the treasury in their after-disposal of the whole lands, was this day the subject of a conference between the Solicitor General, Mr. Hutcheson, and myself. The method agreed on is, by a rent charge on the whole crown-lands, redeemable on the crown's paying twenty thousand pounds for the use of the President and fellows of St. Paul's, and their successors. Sir Robert Walpole hath signified that he hath no objection to this method; and I doubt not Baron Scroop will agree to it: by which means the grant may be passed before the meeting of parliament; after which we may prepare to set out on our voyage in April. I have unawares run into this long account, because you desired to know how the affair of Bermuda stood at present.

Ex. 13.—Feb. 27, 1727. My going to Bermuda I cannot positively say when it will be. I have to do with very busy people at a very busy time. I hope nevertheless to have all that business completely finished in a few weeks.

Ex. 14.—April 11, 1727. Now I mention my coming to Ireland, I must earnestly desire you by all means to keep this a secret from every individual creature. I cannot justly say what time (probably some time next month) I shall be there, or how long; but find it necessary to be there to transact matters with one or two of my associates, whom yet I would not have know of my coming till I am on the spot; and for several reasons am determined to keep myself as secret and concealed as possible all

the time I am in Ireland. In order to this, I make it my request that you will hire for me an entire house, as neat and convenient as you can get, somewhere within a mile of Dublin, for half a year. But what I principally desire is, that it be in no town or village, but in some quiet private place, out of the way of roads, or street, or observation. I would have it hired with necessary furniture for kitchen, a couple of chambers, and a parlour. At the same time I must desire you to hire an honest maid-servant who can keep it clean, and dress a plain bit of meat: a man-servant I shall bring with me. You may do all this either in your own name, or as for a friend of yours, one Mr. Brown (for that is the name I shall assume), and let me know it as soon as possible. There are several little scattered houses with gardens about Clontarf, Rathfarnham, &c. I remember particularly the old castle of Rathmines, and a little white house upon the hills by itself beyond the old men's hospital; likewise in the outgoings or fields about St. Kevin's, &c. In short, in any snug private place within half a mile or a mile of town. I would have a bit of a garden to it, no matter what sort. Mind this, and you will oblige yours.

Ex. 15.—May 20, 1727. I would by all means have a place secured for me by the end of June: it may be taken only for three months. I am, God be praised, very near concluding the crown grant to our college, having got over all difficulties and obstructions, which were not a few. I conclude in great haste yours.

Ex. 16.—June 13, 1727. Poor Caldwell's death I had heard of two or three posts before I received your letters. Had he lived, his life would not have been agreeable. He was formed for retreat and study, but of late was grown fond of the world and getting into business.—A house between Dublin and Drumcondra I can by no means approve of: the situation is too public, and what I chiefly regard is privacy. I like the situation of Lord's house much better, and have only one objection to it, which is your saying he intends to use some part of it himself: for this would be inconsistent with my view of being quite concealed, and the more so because Lord knows me, which of all things is what I would avoid. His house and price would suit me. If you can get such another quite to myself, snug, private, and clean, with a stable, I shall not matter whether it be painted or no, or how it is furnished, provided it be clean and warm. I aim at nothing magnificent or grand (as you term it), which might probably defeat my purpose of continuing concealed.

Ex. 17.—June 15, 1727. Yesterday we had an account of King George's death. This day King George II. was proclaimed. All the world here are in a hurry, and I as much as any body, our grant being defeated by the King's dying before the broad seal was annexed to it, in order to which it was passing through the offices. I have *la mer à boire* again. You shall hear from me when I know more. At present I am at a loss what course to take.

Ex. 17.—June 27, 1727. In a former letter, I gave you to know that my affairs were unravelled by the death of his Majesty. I am now beginning on a new foot, and with good hopes of success. The warrant for our grant had been signed by the king, countersigned by the lords of the treasury, and passed the Attorney General: here it stood, when the express came of the King's death. A new warrant is now preparing, which must be signed by his present Majesty in order to a patent's passing the broad seal. As soon as this affair is finished, I propose going to Ireland.

Ex. 18.—July 6, 1727. I have obtained a new warrant for a grant, signed by his present Majesty, contrary to the expectations of my friends, who thought nothing could be expected of that kind in this great hurry of business. As soon as this grant, which is of the same import with that begun by his late Majesty, hath passed the offices and seals, I propose to execute my design of going to Ireland.

Ex. 19.—July 21, 1727. My grant is now got further than where it was at the time of the King's death. I am in hopes the broad seal will soon be put to it, what remains to be done in order thereto being only matter of form: so that I propose setting out from hence in a fortnight's time. When I set out, I shall write at the same time to tell you of it. I know not whether I shall stay longer than a month on that side of the water: I am sure I shall not want the country lodging I desired you to procure for a longer time. Do not therefore take it for more than a month, if that can be done. I remember certain remote suburbs called Pimlico and Dolphin's barn, but know not where about they lie. If either of them be situate in a private pleasant place, and airy, near the fields, I should therein like a first floor, in a clean house (I desire no more); and it would be better if there was a bit of a garden, where I had the liberty to walk. This I mention in case my former desire cannot be conveniently answered for so short a time as a month; and if I may judge at this distance, those places

seem as private as a house in the country. For you must know, what I chiefly aim at is secrecy. This makes me uneasy to find that there hath been a report spread among some of my friends in Dublin of my designing to go over. I cannot account for this, believing, after the precautions I had given you, that you would not mention it, directly or indirectly, to any mortal.

Ex. 20.—Feb. 20, 1728. I need not repeat to you what I told you here of the necessity there is for my raising all the money possible against my voyage, which, God willing, I shall begin in May, whatever you may hear suggested to the contrary; though you need not mention this. I propose to set out for Dublin about a month hence: but of this you must not give the least intimation to any body. I beg the favour of you to look out at leisure a convenient lodging for me in or about Church-street, or such other place as you shall think the most retired.—I do not design to be known when I am in Ireland.

Ex. 21.—April 6, 1728. I have been detained from my journey partly in expectation of Dr. Clayton's coming, who was doing business in Lancashire, and partly in respect to the excessive rains. The Doctor hath been several days in town, and we have had so much rain that probably it will be soon over. I am therefore daily expecting to set out, all things being provided. Now it is of all things my earnest desire (and for very good reasons) not to have it known that I am in Dublin. Speak not, therefore, one syllable of it to any mortal whatsoever. When I formerly desired you to take a place for me near the town, you gave out that you were looking for a retired lodging for a friend of yours; upon which every body surmised me to be the person. I must beg you not to act in the like manner now, but to take for me an entire house in your own name, and as for yourself: for, all things considered, I am determined upon a whole house, with no mortal in it but a maid of your own putting, who is to look on herself as your servant. Let there be two bed-chambers, one for you, another for me; and as you like you may ever and anon lie there. I would have the house, with necessary furniture, taken by the month (or otherwise, as you can), for I purpose staying not beyond that time: and yet perhaps I may. Take it as soon as possible, and never think of saving a week's hire by leaving it to do when I am there. Dr. Clayton thinks (and I am of the same opinion) that a convenient place may be found in the further end of Great-Britain street, or Ballibough-bridge—by all means beyond Thomson's, the Fellow's. Let

me entreat you to say nothing of this to any body, but to do the thing directly. In this affair I consider convenience more than expense, and would of all things (cost what it will) have a proper place in a retired situation, where I may have access to fields and sweet air, provided against the moment I arrive. I am inclined to think, one may be better concealed in the outermost skirt of the suburbs than in the country, or within the town. Wherefore if you cannot be accommodated where I mention, inquire in some other skirt or remote suburb. A house quite detached in the country I should have no objection to, provided you judge that I shall not be liable to discovery in it. The place called Bermuda I am utterly against. Dear Tom, do this matter cleanly and cleverly, without waiting for further advice. You see I am willing to run the risk of the expense. To the person from whom you hire it (whom alone I would have you speak of it to) it will not seem strange you should at this time of the year be desirous, for your own convenience or health, to have a place in a free and open air. If you cannot get a house without taking it for a longer time than a month, take it at such the shortest time it can be let for, with agreement for further continuing in case there be occasion.—Mr. Madden, who witnesses the letter of attorney, is now going to Ireland. He is a clergyman, and man of estate in the north of Ireland.

Ex. 22.—Gravesend, Sept. 5, 1728. To-morrow, with God's blessing, I set sail for Rhode-island, with my wife and a friend of her's, my Lady Hancock's daughter, who bears us company. I am married since I saw you, to Miss Forster, daughter of the late Chief Justice, whose humour and turn of mind pleases me beyond any thing I knew in her whole sex. Mr. James, Mr. Dalton, and Mr. Smilert, go with us on this voyage: we are now altogether at Gravesend, and engaged in one view. When my next rents are paid, I must desire you to inquire for my cousin Richard Berkeley,* who was bred a public notary (I suppose he may by that time be out of his appren-

* This act of goodness to a poor relation being a matter altogether of a private nature, the editor was not sure whether he ought to have communicated it to the public. Certainly it is not given as an uncommon feature in our Author's character, that he should be liberal to his relations: his letters furnish many proofs of his generosity. But the reader will be pleased to recollect the time when this young man's wants were attended to—the whole soul of the Bermuda projector on the stretch to attain, what after so many obstructions seemed at last to be within his grasp.

ticeship), and give him twenty moidores as a present from me towards helping him on his beginning the world. I believe I shall have occasion for six hundred pounds English before this year's income is paid by the farmers of my deanery. I must therefore desire you to speak to Mess. Swift, &c. to give me credit for said sum in London about three months hence, in case I have occasion to draw for it, and I shall willingly pay their customary interest for the same till the farmers pay it to them, which I hope you will order punctually to be done by the first of June. Direct for me in Rhode-island, and enclose your letter in a cover to Thomas Corbet, esq. at the Admiralty-office in London, who will always forward my letters by the first opportunity. Adieu: I write in great haste. A copy of my charter was sent to Dr. Ward by Dr. Clayton: if it be not arrived, when you go to London, write out of the charter the clause relating to my absence. Adieu once more.

Ex. 23.—Newport in Rhode-island, April 24, 1729. I can by this time say something to you, from my own experience, of this place and people. The inhabitants are of a mixed kind, consisting of many sects and subdivisions of sects. Here are four sorts of anabaptists, besides presbyterians, quakers, independents, and many of no profession at all. Notwithstanding so many differences, here are fewer quarrels about religion than elsewhere, the people living peaceably with their neighbours of whatsoever persuasion. They all agree in one point, that the church of England is the second best. The climate is like that of Italy, and not at all colder in the winter than I have known it every where north of Rome. The spring is late: but to make amends, they assure me the autumns are the finest and longest in the world; and the summers are much pleasanter than those of Italy by all accounts, forasmuch as the grass continues green, which it doth not there. This island is pleasantly laid out in hills and vales and rising grounds, hath plenty of excellent springs and fine rivulets, and many delightful landscapes of rocks and promontories and adjacent lands. The provisions are very good; so are the fruits, which are quite neglected, though vines sprout up of themselves to an extraordinary size, and seem as natural to this soil as to any I ever saw. The town of Newport contains about six thousand souls, and is the most thriving flourishing place in all America for its bigness. It is very pretty, and pleasantly situated. I was never more agreeably surprised than at the first sight of the town and its harbour. I could give you some hints that

may be of use to you, if you were disposed to take advice: but of all men in the world I never found encouragement to give you any.—I have heard nothing from you or any of my friends in England or Ireland, which makes me suspect my letters were in one of the vessels that were wrecked. I write in great haste, and have no time to say a word to my brother Robin: let him know we are in good health. Take care that my draughts are duly honoured, which is of the greatest importance to my credit here; and if I can serve you in these parts, you may command yours, &c.

Ex. 24.—Newport in Rhode-island, June 12, 1729. Being informed that an inhabitant of this country is on the point of going for Ireland, I would not omit writing to you. The winter, it must be allowed, was much sharper than the usual winters in Ireland, but not at all sharper than I have known them in Italy. To make amends, the summer is exceeding delightful: and if the spring begins late, the autumn ends proportionably later than with you, and is said to be the finest in the world. I snatch this moment to write, and have time only to add that I have got a son, who, I thank God, is likely to live.—I find it hath been reported in Ireland, that we purpose settling here: I must desire you to discountenance any such report. The truth is, if the King's bounty were paid in, and the charter could be removed hither, I should like it better than Bermuda. But if this were mentioned before the payment of said money, it might perhaps hinder it, and defeat all our designs. As to what you say of Hamilton's proposal, I can only answer at present by a question, viz. whether it be possible for me in my absence to be put in possession of the deanery of Dromore? Desire him to make that point clear, and you shall hear further from me.

Ex. 25.—Rhode-island, March 9, 1730. My situation hath been so uncertain, and is like to continue so till I am clear about the receipt of his Majesty's bounty, and in consequence thereof, of the determination of my associates, that you are not to wonder at my having given no categorical answer to the proposal you made in relation to Hamilton's deanery, which his death hath put an end to. If I had returned, I should perhaps have been under some temptation to have changed. But as my design still continues to wait the event, and go to Bermuda as soon as I can get associates and money, which my friends are now soliciting in London, I shall in such case persist in my first resolution of not holding any deanery beyond the limited time.—I live here upon land that I have purchased, and in a farm-house that I have built

in this island: it is fit for cows and sheep, and may be of good use in supplying our college at Bermuda. Among my delays and disappointments I thank God I have two domestic comforts that are very agreeable, my wife and my little son, both which exceed my expectations, and fully answer all my wishes.—Messrs. James, Dalton, and Smilert, &c. are at Boston, and have been there these four months. My wife and I abide by Rhode-island, preferring quiet and solitude to the noise of a great town, notwithstanding all the solicitations that have been used to draw us thither.—I have desired Mac Manus, in a letter to Dr. Ward, to allow twenty pounds per ann. for me towards the poor-house now on foot for clergymen's widows in the diocess of Derry.

Ex. 26.—Rhode-island, May 7, 1730. Last week I received a packet from you by the way of Philadelphia, the postage whereof amounted to above four pounds of this country money. I thank you for the enclosed pamphlet,* which in the main I think very seasonable and useful. It seems to me that, in computing the sum total of the loss by absentees, you have extended some articles beyond their due proportion—*e. g.* when you charge the whole income of occasional absentees in the third class; and that you have charged some articles twice—*e. g.* when you make distinct articles for lawsuits 9000*l.* and for attendance on employments and other business 8000*l.* both which seem already charged in the third class. The tax you propose seems very reasonable, and I wish it may take effect for the good of the kingdom, which will be obliged to you if it can be brought about. That it would be the interest of England to allow a free trade to Ireland, I have been thoroughly convinced, ever since my being in Italy and talking with the merchants there; and have upon all occasions endeavoured to convince English gentlemen thereof, and have convinced some both in and out of parliament; and I remember to have discoursed with you at large upon the subject when I was last in Dublin. Your hints for setting up new manufactures seem reasonable: but the spirit of projecting is low in Ireland.—Now as to my own affair, I must tell you I have no intention of continuing in these parts, but in order to settle the college his Majesty hath been pleased to found in Bermuda: and I want only the payment of the King's grant to transport myself

* Mr. Prior's celebrated *List of the Absentees of Ireland*, published in 1729.

and family thither. I am now employing the interest of my friends in England for that purpose, and I have wrote in the most pressing manner either to get the money paid, or at least such an authentic answer as I may count upon and may direct me what course I am to take. Dr. Clayton indeed hath wrote me word, that he hath been informed by a very good friend of mine, who had it from a very great man, that the money will not be paid. But I cannot think a hearsay at second or third hand to be a proper answer for me to act upon. I have therefore suggested to the Doctor, that it might be proper for him to go himself to the treasury with the letters patent containing the grant in his hands, and there make his demand in form. I have also wrote to others to use their interest at court; though indeed one would have thought all solicitation at an end when once I had obtained a grant under his Majesty's hand and the broad seal of England. As to my own going to London and soliciting in person, I think it reasonable first to see what my friends can do; and the rather because I shall have small hopes that my solicitation will be regarded more than theirs. Be assured I long to know the upshot of this matter, and that upon an explicit refusal I am determined to return home, and that it is not at all my thoughts to continue abroad and hold my deanery. It is well known to many considerable persons in England, that I might have had a dispensation for holding it in my absence during life, and that I was much pressed to it; but I resolutely declined it: and if our college had taken place as soon as I once hoped it would, I should have resigned before this time. A little after my coming to this island, I entertained some thoughts of applying to his Majesty (when Dr. Clayton had received the 20,000*l.*) to translate our college hither; but have since seen cause to lay aside all thoughts of that matter. I do assure you *bonâ fide* that I have no intention to stay here longer than I can get an authentic answer from the government, which I have all the reason in the world to expect this summer: for, upon all private accounts, I should like Derry better than New England. As to my being in this island, I think I have already informed you that I have been at very great expense in purchasing land and stock here, which might supply the defects of Bermuda in yielding those provisions to our college, the want of which was made a principal objection against its situation in that island. To conclude, as I am here in order to execute a design addressed for by parliament, and set on foot by his Majesty's royal charter, I think myself obliged to wait the

event, whatever course is taken in Ireland about my deanery. I have wrote to both the Bishops of Raphoe and Derry: but letters, it seems, are of uncertain passage: your last was half a year in coming, and I have had some a year after their date, though often in two or three months, and sometimes less. I must desire you to present my duty to both their Lordships, and acquaint them with what I have now wrote to you, in answer to the kind message from my Lord Bishop of Derry conveyed by your hands, for which pray return my humble thanks to his Lordship. My wife gives her service to you. She hath been lately ill of a miscarriage, but is now, I thank God, recovered. Our little son is great joy to us: we are such fools as to think him the most perfect thing in its kind that we ever saw.

Ex. 27.—Newport, July 20, 1730. Since my last of May 7, I have not had one line from the persons to whom I had wrote to make the last instances for the 20,000*l.* This I impute to an accident that we hear happened to a man-of-war, as it was coming down the river bound for Boston, where it was expected some months ago, and is now daily looked for with the new governor. The newspapers of last February mentioned Dr. Clayton's being made bishop. I wish him joy of his preferment, since I doubt we are not likely to see him in this part of the world.

The settlement of affairs with his fellow-executor Mr. Marshal, with a Mr. Partinton Vanhomrigh, and with the creditors of Mrs. Esther Vanhomrigh, in London, involved our author in a great deal of trouble for near four years. His letters to Mr. T. Prior are full of this business, which cannot at this day be interesting to any body. It is thought proper however to subjoin a few extracts from them, as a proof how strongly he felt this embarrassment in the midst of his Bermuda project.

Ex. 28.—London, Dec. 8, 1724. Provided you bring my affair with Partinton to a complete issue before Christmas-day come twelvemonth, by reference or otherwise, that I may have my dividend, whatever it is, clear, I do hereby promise you to increase the premium I promised you before by its fifth part, whatever it amounts to.

Ex. 29.—July 20, 1725. Our South-sea stock is confirmed to be what I already informed you, 880*l.* somewhat more or less. But before you get Partinton and Marshal to sign the letters of

attorney or make the probates, nay before you tell them of the value of the subscribed annuities, you should by all means, in my opinion, insist, carry, and secure two points: first, that Partinton should consent to a partition of this stock, &c. which I believe he cannot deny: secondly, that Marshal should engage not to touch one penny of it till all debts on this side the water are satisfied. I even desire you would take advice, and legally secure it in such sort that he may not touch it if he would, till the said debts are paid. It would be the wrongest thing in the world, and give me the greatest pain possible to think, we did not administer in the justest sense. Whatever therefore appears to be due, let it be instantly paid: here is money sufficient to do it. I must therefore entreat you once for all to clear up and agree with Marshal what is due, and then make an end by paying that which it is a shame was not paid sooner. For God's sake adjust, finish, conclude any way with Partinton; for at the rate we have gone on these two years, we may go on twenty. In your next let me know what you have proposed to him and Marshal, and how they relish it. I hoped to have been in Dublin by this time; but business grows out of business. P. S. Bermuda prospers.

Ex. 30.—October 16, 1725. I beg you will lose no more time, but take proper methods out of hand for selling the S. S. stock and annuities. I have very good reason to apprehend they will sink in their value, and desire you to let Vanhomrigh Partinton and Mr. Marshal know as much. The less there is to be expected from them, the more I must hope from you. I know not how to move them at this distance but by you; and if what I have already said will not do, I profess myself to be at a loss for words to move you. You have told me Partinton was willing to refer matters to an arbitration, but not of lawyers; and that Marshal would refer them only to lawyers. For my part, rather than fail, I am for referring them to any honest knowing person or persons, whether lawyers or not lawyers; and if M. will not come into this, I desire you will do all you can to oblige him, either by persuasion or otherwise: particularly represent to him my resolution of going (with God's blessing) in April next to Bermuda, which will probably make it his interest to compromise matters out of hand. But if he will not, agree if possible with P. to force him to compliance in putting an end to our disputes.

Ex. 31.—Dec. 2, 1725. I must repeat to you that I earnestly

wish to see things brought to some conclusion with Partinton. Dear Tom, it requires some address, diligence, and management, to bring business of this kind to an issue, which should not seem impossible, considering it can be none of our interests to spend our lives and substance in law. I am willing to refer things to an arbitration, even not of lawyers. Pray push this point, and let me hear from you upon it.

Ex. 32.—Dec. 11, 1725. It is now near three months since I told you there were strong reasons for haste [in selling the S. S. stock], and these reasons grow every moment stronger. I need say no more; I can say no more to you.

Ex. 33.—Dec. 30, 1725. I am exceedingly plagued by these creditors, and am quite tired and ashamed of repeating the same answer to them, that I expect every post to hear what Mr. Marshal and you think of their pretensions, and that then they shall be paid. It is now a full twelvemonth that I have been expecting to hear from you on this head, and expecting in vain. I shall therefore expect no longer, nor hope or desire to know what Mr. Marshal thinks, but only what you think, or what appears to you by Mrs. Vanhomrigh's papers and accounts. This is what solely depends on you, what I sued for several months ago, and what you promised to send me an account of long before this time.

Ex. 34.—Jan. 20, 1726. I am worried to death by creditors: I see nothing done, neither towards clearing their accounts, nor settling the effects here, nor finishing affairs with Partinton. I am at an end of my patience, and almost of my wits. My conclusion is, not to wait a moment longer for Marshal, nor to have (if possible) any further regard to him, but to settle all things without him, and whether he will or no. How far this is practicable, you will know by consulting an able lawyer. I have some confused notion that one executor may act by himself; but how far, and in what case, you will thoroughly be informed. It is an infinite shame that the debts here are not cleared up and paid. I have borne the shock and importunity of creditors above a twelvemonth, and am never the nearer—have nothing new to say to them: judge you what I feel. But I have already said all that can be said on this head. It is also no small disappointment to find that we have been near three years doing nothing with respect to bringing things to a conclusion with Partinton. Is there no way of making a separate agreement with him? Is there no way of prevailing with him to consent to the sale of the

reversion? Let me entreat you to proceed with a little management and dispatch in these matters, and inform yourself particularly whether I may not come to a reference or arbitration with P. even though M. should be against it? whether I may not take steps that may compel M. to an agreement? what is the practised method, when one of two executors is negligent or unreasonable? In a word, whether an end may not be put to these matters one way or other? I do not doubt your skill: I only wish you were as active to serve an old friend as I should be in any affair of yours that lay in my power.

Ex. 35.—Sept. 3, 1726. I must desire you to send me in a letter a full state of the particulars of our pretensions upon Partinton, that I may have a view of the several emoluments expected from this suit, and the grounds of such expectation, these affairs being at present a little out of my thoughts; that so having considered the whole, I may take advice here, and write thereupon to Marshal, in order to terminate that affair this winter, if possible. It is worth while to exert for once. If this be done, the whole partition may be made, and your share distinctly known and paid you between this and Christmas. But I know it cannot be done unless you exert. As for M. I had from the beginning no opinion of him, no more than you have; otherwise I should not have troubled any body else.

Ex. 36.—Nov. 12, 1726. I have writ to you often for certain eclaircissements which are absolutely necessary to settle matters with the creditors, who importune me to death. You have no notion of the misery I have undergone, and do daily undergo on that account. For God's sake disembrangle these matters, that I may once be at ease to mind my other affairs of the college, which are enough to employ ten persons. I will not repeat what I have said in my former letters, but hope for your answer to all the points contained in them, and immediately to what relates to dispatching the creditors. I propose to make a purchase of land (which is very dear) in Bermuda, upon my first going thither; for which, and for other occasions, I shall want all the money I can possibly raise against my voyage. For this purpose it would be a mighty service to me if the affairs with P. were adjusted this winter by reference or compromise. The state of all that business, which I desired you to send me, I do now again earnestly desire. What is doing, or has been done, in that matter? Can you contrive no way for bringing P. to an immediate sale of the remaining lands? What is your opinion

and advice upon the whole? What prospect can I have, if I leave things at sixes and sevens when I go to another world, seeing all my remonstrances even now that I am near at hand are to no purpose? I know money is at present at a very high foot of exchange. I shall therefore wait a little, in hopes it may become lower: but it will at all events be necessary to draw over my money. I have spent here a matter of 600*l.* more than you know of, for which I have not yet drawn over. I had some other points to speak to, but am cut short.

Ex. 37.—Dec. 1, 1726. I have lately received several letters of yours, which have given me a good deal of light with respect to Mrs. Vanhomrigh's affairs. But I am so much employed on the business of Bermuda, that I have hardly time to mind any thing else. I shall nevertheless snatch the present moment to write you short answers to the queries you propose. As to Bermuda, it is now, &c. [See above, Ex. 12.] You also desire I would speak to Ned. You must know Ned hath parted from me ever since the beginning of last July. I allowed him six shillings a week, beside his annual wages; and beside an entire livery, I gave him old clothes, which he made a penny of. But the creature grew idle and worthless to a prodigious degree: he was almost constantly out of the way; and when I told him of it, he used to give me warning. I bore with this behaviour about nine months, and let him know I did it in compassion to him, and in hopes he would mend: but finding no hopes of this, I was forced at last to discharge him, and take another, who is as diligent as he was negligent. When he parted from me, I paid him between six and seven pounds, which was due to him, and likewise gave him money to bear his charges to Ireland, whither he said he was going. I met him t'other day in the street, and asking why he was not gone to Ireland to his wife and child, he made answer that he had neither wife nor child. He got, it seems, into another service when he left me, but continued only a fortnight in it. The fellow is silly to an incredible degree, and spoiled by good usage. I shall take care the pictures be sold in an auction. Mr. Smilert, whom I know to be a very honest skilful person in his profession, will see them put into an auction at the proper time, which he tells me is not till the town fills with company, about the meeting of parliament.—I remember to have told you I could know more of matters here than perhaps people generally do. You thought we did wrong

to sell: but the stocks are fallen, and depend upon it they will fall lower.

After our Author's return to Europe, the correspondence was renewed with Mr. Prior. The following extracts will continue Dr. Berkeley's history to a late period of his life.

Ex. 38.—Green-street, March 13, 1733. I thank you for the account you sent me of the house, &c. on Arbor-hill. I approve of that and the terms: so you will fix the agreement for this year to come (according to the tenor of your letter), with Mr. Lesly, to whom my humble service. I remember one of that name, a good sort of man, a class or two below me in the college. I am willing to pay for the whole year, commencing from the 25th instant, but cannot take the furniture, &c. into my charge till I go over, which I truly propose to do as soon as my wife is able to travel. She expects to be brought to bed in two months; and having had two miscarriages, one of which she was extremely ill of, in Rhode-island, she cannot venture to stir before she is delivered. This circumstance not foreseen occasions an unexpected delay, putting off to summer the journey I proposed to take in spring. I hope our affair with Partinton will be finished this term. We are here on the eve of great events, tomorrow being the day appointed for a pitched battle in the House of Commons.

Ex. 39.—March 27, 1733. This comes to desire you will exert yourself on a public account, which you know is acting in your proper sphere. It has been represented here, that in certain parts of the kingdom of Ireland, justice is much obstructed for the want of justices of the peace, which is only to be remedied by taking in dissenters. A great man hath spoke to me on this point. I told him the view of this was plain; and that in order to facilitate this view I suspected the account was invented, for that I did not think it true. Depend upon it, better service cannot be done at present than by putting this matter as soon as possible in a fair light, and that supported by such proofs as may be convincing here. I therefore recommend it to you to make the speediest and exactest inquiry that you can into the truth of this fact, the result whereof send to me. Send me also the best estimate you can get of the number of papists, dissenters, and churchmen, throughout the kingdom; an estimate also of dissen-

ters considerable for rank, figure, and estate; an estimate also of the papists in Ulster. Be as clear in these points as you can. When the abovementioned point was put to me, I said that in my apprehension there was no such lack of justice or magistrates except in Kerry or Connaught, where the dissenters were not considerable enough to be of any use in redressing the evil. Let me know particularly whether there be any such want of justices of the peace in the county of Londonderry, or whether men are aggrieved there by being obliged to repair to them at too great distances. The prime serjeant Singleton may probably be a means of assisting you to get light in these particulars. The dispatch you give this affair will be doing the best service to your country. Enable me to clear up the truth, and to support it by such reasons and testimonies as may be felt or credited. Facts I am myself too much a stranger to, though I promise to make the best use I can of those you furnish me with, towards taking off an impression which I fear is already deep. If I succeed, I shall congratulate my being here at this juncture.

Ex. 40.—April 14, 1733. I thank you for your last, particularlarly for that part of it wherein you promise the number of the justices of peace, of the papists also, and protestants, throughout the kingdom, taken out of proper offices. I did not know such inventories had been taken by public authority, and am glad to find it so. Your argument for proving papists but three to one I had before made use of; but some of the premises are not clear to Englishmen. Nothing can do so well as the estimate you speak of, to be taken from a public office; which therefore I impatiently expect. As to the design I hinted, whether it is to be set on foot there or here I cannot say. I hope it will take effect no where. It is yet a secret: I may, nevertheless, discover something of it in a little time, and you may then hear more. The political state of things on this side the water I need say nothing of: the public papers probably say too much; though it cannot be denied much may be said. I must desire you in your next to let me know what premium there is for getting into the public fund which allows five per cent. in Ireland; and whether a considerable sum might easily be purchased therein: also what is the present legal current interest in Ireland; and whether it be easy to lay out money on a secure mortgage where the interest should be punctually paid. I shall be also glad to hear a word about the lawsuit.

Ex. 41.—April 19, 1733. I thank you for your last advices,

and the catalogue of justices particularly; of all which proper use shall be made. The number of protestants and papists throughout the kingdom, which in your last but one you said had been lately and accurately taken by the collectors of hearth-money, you promised, but have omitted to send: I shall hope for it in your next.

Ex. 42.—May 1, 1733. I long for the numeration of protestant and popish families, which you tell me has been taken by the collectors. A certain person now here hath represented the papists as seven to one, which I have ventured to affirm is wide of the truth. What lights you gave me I have imparted to those who will make the proper use of them. I do not find that any thing was intended to be done by act of parliament here: as to that, your information seems right. I hope they will be able to do nothing any where. The approaching act at Oxford is much spoken of. The entertainments of music, &c. in the theatre will be the finest that ever were known. For other public news, I reckon you know as much as yours.

Ex. 43.—Jan. 7, 1734. My family are, I thank God, all well at present: but it will be impossible for us to travel before the spring. As to myself, by regular living and rising very early, which I find the best thing in the world, I am very much mended: insomuch that though I cannot read, yet my thoughts seem as distinct as ever. I do therefore for amusement pass my early hours in thinking of certain mathematical matters, which may possibly produce something. You say nothing of the lawsuit. I hope it is to surprise me in your next with an account of its being finished. Perhaps the house and garden at Montpelier-hill may be got a good pennyworth, in which case I should not be averse to buying it. It is probable a tenement in so remote a part may be purchased at an easy rate.

Ex. 44.—Jan. 15, 1734. I received last post your three letters together, for which advices I give you thanks. I had at the same time two from Baron Wainwright on the same account. That without my intermeddling I may have the offer of somewhat, I am apt to think, which may make me easy in point of situation and income, though I question whether the dignity will much contribute to make me so. Those who imagine, as you write, that I may pick and choose, to be sure think that I have been making my court here all this time, and would never believe (what is most true) that I have not been at the court, or at the minister's, but once these seven years. The care of my health

and the love of retirement have prevailed over whatsoever ambition might have come to my share.—Pray send me as particular an account as you can get of the country, the situation, the house, the circumstances, of the bishoprick of Cloyne: and let me know the charge of coming into a bishoprick, *i. e.* the amount of the fees and first-fruits.

Ex. 45.—Jan. 19, 1734. Since my last I have kissed their Majesties' hands for the bishoprick of Cloyne, having first received an account from the Duke of Newcastle's office, setting forth, that his Grace had laid before the King the Duke of Dorset's recommendation, which was readily complied with by his Majesty. The condition of my own health and that of my family will not suffer me to travel at this season of the year; I must therefore entreat you to take care of the fees and patent. I shall be glad to hear from you what you can learn about this bishoprick of Cloyne.

Ex. 46.—Jan. 22, 1734. On the 6th inst. the Duke sent over his plan, wherein I was recommended to the bishoprick of Cloyne: on the 14th I received a letter from the Secretary's office, signifying his Majesty's having immediately complied therewith, and containing the Duke of Newcastle's very obliging compliments thereupon. In all this I was nothing surprised, his Grace the Lord Lieutenant having declared on this side the water, that he intended to serve me the first opportunity, though at the same time he desired me to say nothing of it. As to the A. B. D. (Archbishop of Dublin, Dr. Hoadly) I readily believe he gave no opposition. He knew it would be to no purpose, and the Queen herself had expressly enjoined him not to oppose me: this I certainly knew when the A. B. was here, though I never saw him. Notwithstanding all which, I had a strong penchant to be dean of Dromore, and not to take the charge of a bishoprick upon me. Those who formerly opposed my being dean of Downe have thereby made me a bishop; which rank, how desirable soever it may seem, I had before absolutely determined to keep out of. The situation of my own and my family's health will not suffer me to think of travelling before April. However, as on that side it may be thought proper that I should vacate the deanery of Derry, I am ready as soon as I hear the bishoprick of Cloyne is void by Dr. Synge's being legally possessed of the see of Ferns, to send over a resignation of my deanery: and I authorize you to signify as much, where you think proper. I should be glad you sent me a rude plan of the house from Bishop Synge's description, that I may forecast the furniture. The great man,

whom you mention as my opponent, concerted his measures but ill. For it appears by your letter, that at the very time when my brother informed the Speaker of his soliciting against me there, the Duke's plan had already taken place here, and the resolution was passed in my favour at St. James's. I am nevertheless pleased, as it gave me an opportunity of being obliged to the Speaker, which I shall not fail to acknowledge when I see him, which will probably be very soon, for he is expected here as soon as the session is up. My family are well, though I myself have gotten a cold this sharp foggy weather, having been obliged, contrary to my wonted custom, to be much abroad, paying compliments and returning visits.

Ex. 47.—Jan. 28, 1734. In a late letter you told me the bishoprick of Cloyne is let for 1,200*l.* per ann. out of which there is a small rent-charge of interest to be paid. I am informed by a letter of yours, which I received this day, that there is also a demesne of 800 acres adjoining to the episcopal house. I desire to be informed by your next, whether these 800 acres are understood to be over and above the 1,200*l.* per ann. and whether they were kept by former bishops in their own hands. In my last I mentioned to you the impossibility of my going to Ireland before spring, and that I would send a resignation of my deanery, if need was, immediately upon the vacancy of the see of Cloyne. I have been since told that this would be a step of some hazard, viz. in case of the King's death, which I hope is far off: however, one would not care to do a thing which may seem incautious and imprudent in the eye of the world. Not but that I would rather do it than be obliged to go over at this season. But as the bulk of the deanery is in tithes, and a very inconsiderable part in land, the damage to my successor would be but a trifle upon my keeping it to the end of March. I would know what you advise on this matter.

Ex. 48.—Feb. 7, 1734. I have been for several days laid up with the gout. When I last wrote to you I was confined, but at first knew not whether it might not be a sprain or hurt from the shoe. But it soon shewed itself a genuine fit of the gout in both my feet by the pain, inflammation, swelling, &c. attended with a fever and restless nights. With my feet lapped up in flannels, and raised on a cushion, I receive the visits of my friends, who congratulate me on this occasion as much as on my preferment.

Ex. 49.—March 2, 1734. As to what you write of the prospect of new vacancies, and your advising that I should apply for a

better bishoprick, I thank you for your advice. But if it please God the Bishop of Derry were actually dead, and there were ever so many promotions thereupon, I would not apply, or so much as open my mouth to any one friend to make an interest for getting any of them. To be so very hasty for a removal, even before I had seen Cloyne, would argue a greater greediness for lucre than I hope I shall ever have. Not but that, all things considered, I have a fair demand upon the government for expense of time and pains and money on the faith of public charters: as likewise because I find the income of Cloyne considerably less than was at first represented. I had no notion that I should, over and above the charge of patents and first-fruits, be obliged to pay between 400*l.* and 500*l.* for which I shall never see a farthing in return, besides interest I am to pay for upwards of 300*l.* which principal devolves upon my successor. No more was I apprized of three curates, viz. two at Youghal and one at Aghadee, to be paid by me. And, after all, the certain value of the income I have not yet learned. My predecessor, writes that he doth not know the true value himself, but believes it may be about 1,200*l.* per ann. including the fines, and striking them at a medium for seven years. The uncertainty, I believe, must proceed from the fines; but it may be supposed that he knows exactly what the rents are, and what the tithes, and what the payments to the curates; of which particulars you may probably get an account from him. Sure I am, that if I had gone to Derry, and taken my affairs into my own hands, I might have made considerably above 1,000*l.* a year, after paying the curates' salaries. And as for charities, such as school-boys, widows, &c. those ought not to be reckoned, because all sorts of charities, as well as contingent expenses, must be much higher on a bishop than a dean. But in all appearance, subducting the money that I must advance, and the expense of the curatesin Youghal and Aghadee, I shall not have remaining 1,000*l.* per ann.; not even though the whole income was worth 1,200*l.* of which I doubt, by Bishop Synge's uncertainty, that it will be found to fall short. I thank you for the information you gave me of a house to be hired in Stephen's Green. I should like the Green very well for situation: but I have no thoughts of taking a house in town suddenly; nor would it be convenient for my affairs so to do, considering the great expense I must be at on coming into a small bishoprick. My gout has left me. I have nevertheless a weakness remaining in my feet, and, what is worse, an extreme tenderness, the effect of my long confinement.

I was abroad the beginning of this week to take a little air in the park, which gave me a cold, and obliged me to physic and two or three days' confinement. I have several things to prepare in order to my journey, and shall make all the dispatch I can. But why I should endanger my health by too much hurry, or why I should precipitate myself in this convalescent state, into doubtful weather and cold lodgings on the road, I do not see. There is but one reason that I can comprehend why the great men there should be so urgent; viz. for fear that I should make an interest here in case of vacancies; which I have already assured you I do not intend to do: so they may be perfectly easy on that score.

Ex. 50.—March 13, 1734. I am *bonâ fide* making all the haste I can. My library is to be embarked on board the first ship bound to Cork, of which I am in daily expectation. I suppose it will be no difficult matter to obtain an order from the commissioners to the custom-house officers there to let it pass duty-free, which at first word was granted here on my coming from America. I wish you would mention this, with my respects, to Dr. Coghil. After my journey I trust that I shall find my health much better, though at present I am obliged to guard against the east-wind, with which we have been annoyed of late, and which never fails to disorder my head. I am in hopes however, by what I hear, that I shall be able to reach Dublin before my Lord Lieutenant leaves it. I shall reckon it my misfortune if I do not: I am sure it shall not be for want of doing all that lies in my power. I am in a hurry. I am obliged to manage my health, and I have many things to do. I must desire you at your leisure to look out a lodging for us, to be taken only by the week: for I shall stay no longer in Dublin than needs must. I would have the lodging taken for the 10th of April.

Ex. 51.—March 20, 1734. There is one Mr. Cox, a clergyman, son to the late Dr. Cox near Drogheda, who, I understand, is under the patronage of Dr. Coghil. Pray inform yourself of his character; whether he be a good man, one of parts and learning, and how he is provided for. This you may possibly do without my being named. Perhaps my brother may know something of him. I should be glad to be apprized of his character on my coming to Dublin. No one has recommended him to me; but his father was an ingenious man, and I saw two sensible women his sisters at Rhode-island, which inclines me to think him a man of merit; and such only I would prefer. I have had certain persons recommended to me; but I shall consider their me-

rits preferably to all recommendation. If you can answer for the ingenuity, learning, and good qualities, of the person you mentioned preferably to that of others in competition, I should be very glad to serve him.

Ex. 52.—St. Alban's, April 30, 1734. I was deceived by the assurance given me of two ships going to Cork. In the event, one could not take in my goods, and the other took freight for another port. So that, after all their delays and prevarications, I have been obliged to ship off my things for Dublin on-board of Captain Leach. From this involuntary cause I have been detained here so long beyond my intentions, which really were to have got to Dublin before the parliament, which now I much question whether I shall be able to do, considering that as I have two young children with me, I cannot make such dispatch on the road as otherwise I might. The lodging in Gervais-street, which you formerly procured for me, will I think do very well. I shall want a stable for six coach-horses: for so many I bring with me.

Ex. 53.—Cloyne, March 5, 1737. I here send you what you desire. If you approve of it, publish it in one or more newspapers: if you have any objection, let me know it by the next post. I mean, as you see, a brief abstract, which I could wish were spread through the nation, that men may think on the subject against next session. But I would not have this letter made public sooner than a week after the publication of the third part of my Querist, which I have ordered to be sent to you. I believe you may receive it about the time that this comes to your hands: for, as I told you in a late letter, I have hastened it as much as possible. I have used the same editor (Dr. Madden) for this as for the two foregoing parts.

Our spinning-school is in a thriving way. The children begin to find a pleasure in being paid in hard money, which I understand they will not give to their parents, but keep to buy clothes for themselves. Indeed I found it difficult and tedious to bring them to this, but I believe it will now do. I am building a workhouse for sturdy vagrants, and design to raise about two acres of hemp for employing them. Can you put me in a way of getting hemp-seed, or does your society distribute any? It is hoped your flax-seed will come in time. Last post a letter from an English bishop tells me, a difference between the King and Prince is got into parliament, and that it seems to be big with mischief, if a speedy expedient be not found to heal the breach.

It relates to the provision for his R. Highness's family. My three children have been ill; the eldest and youngest are recovered; but George is still unwell.

[Enclosed in the above a Letter to A. B. Esq. from the Querist, containing Thoughts on a National Bank, printed in the Dublin Journal.]

Ex. 54.—Cloyne, Feb. 15, 1741. Mr. Faulkner, the following being a very safe and successful cure in the bloody flux, which at this time is become so general, you will do well to make it public. Give a heaped spoonful of common rosin, powdered in a little fresh broth, every five or six hours, till the bloody flux is stopped; which I have always found before a farthing's worth of rosin was spent. If after the blood is staunched there remains a little looseness, this is soon carried off by milk and water boiled with a little chalk in it. This cheap and easy method I have often tried of late, and never knew it fail. I am your humble servant A. B.

Ex. 55.—Cloyne, Feb. 24, 1741. I find you have published my remedy in the newspaper of this day. I now tell you that the patients must be careful of their diet, and especially beware of taking cold. The best diet I find to be plain broth of mutton or fowl, without seasoning of any kind. Their drink should be, till they are freed both from dysentery and diarrhœa, milk and water, or plain water boiled with chalk (drank warm), *e. g.* about a large heaped spoonful to a quart. Sometimes I find it necessary to give it every four hours, and to continue it for a dose or two after the blood hath been stopped, to prevent relapses, which ill management hath now and then occasioned. Given in due time (the sooner the better), and with proper care, I take it to be as sure a cure for a dysentery as the bark for an ague. It has certainly by the blessing of God saved many lives, and continues to save many lives, in my neighbourhood. I shall be glad to know its success in any instances you may have tried it in.

Ex. 56.—Cloyne, Feb. 26, 1741.—I believe there is no relation that Mr. Sandys and Sir John Rushout have to Lord Wilmington, other than what I myself made by marrying Sir John Rushout's sister to the late Earl of Northampton, who was brother to Lord Wilmington. Sandys is nephew to Sir John. As to kindred or affinity, I take it to have very little place in this matter. Nor do I think it possible to foretell whether the ministry will be Whig or Tory. The people are so generally and so

much incensed, that (if I am rightly informed) both men and measures must be changed before we see things composed. Besides, in this disjointed state of things, the Prince's party will be more considered than ever. It is my opinion, there will be no first minister in haste: and it will be new to act without one. When I had wrote thus far, I received a letter from a considerable hand on the other side of the water, wherein are the following words. "Though the Whigs and Tories had gone hand in hand in their endeavour to demolish the late ministry, yet some true Whigs, to shew themselves such, were for excluding all Tories from the new ministry. Lord Wilmington and Duke of Dorset declared they would quit, if they proceeded on so narrow a bottom: and the Prince, Duke of Argyle, Duke of Bedford, and many others, refused to come in, except there was to be a coalition of parties. After many fruitless attempts to effect this, it was at last achieved between eleven and twelve on Tuesday night, and the Prince went next morning to St. James's. It had been that very evening quite despaired of; and the meeting of the parliament came on so fast, that there was a prospect of nothing but great confusion." There is, I hope, a prospect now of much better things. I much wanted to see this scheme prevail; which it has now done, and will, I trust, be followed by many happy consequences.

Ex. 57.—Cloyne, May 19, 1741. Though the flax-seed came in such quantity and so late, yet we have above one half ourselves in ground, the rest together with our own seed has been given to our poor neighbours, and will, I doubt not, answer, the weather being very favourable. The distresses of the sick and poor are endless. The havoc of mankind in the counties of Cork, Limerick, and some adjacent places, hath been incredible. The nation probably will not recover this loss in a century. The other day, I heard one from the county of Limerick say, that whole villages were entirely dispeopled. About two months since, I heard Sir Richard Cox say, that five hundred were dead in the parish where he lives, though in a country, I believe, not very populous. It were to be wished people of condition were at their seats in the country during these calamitous times, which might provide relief and employment for the poor. Certainly, if these parish, the rich must be sufferers in the end. We have tried in this neighbourhood the receipt of a decoction of brier-roots for the bloody-flux, which you sent me, and in some cases found it useful. But that which we find the

most speedy, sure, and effectual cure above all others, is a heaped spoonful of rosin, dissolved and mixed over a fire with two or three spoonfuls of oil, and added to a pint of broth for a clyster: which, upon once taking, hath never been known to fail stopping the bloody-flux. At first I mixed the rosin in the broth: but that was difficult, and not so speedy a cure.

Ex. 58.—Cloyne, Feb. 1746. (With a letter signed Eubulus, containing advice about the manner of clothing the militia arrayed this year, which letter was printed in the Dublin Journal.) The above letter contains a piece of advice which seems to me not unseasonable or useless. You may make use of Faulkner for conveying it to the public, without any intimation of the author. There is handed about a lampoon against our troop, which hath caused great indignation in the warriors of Cloyne. I am informed that Dean Gervais had been looking for the Querist, and could not find one in the shops, for my Lord Lieutenant, at his desire. I wish you could get one, handsomely bound, for his Excellency; or at least, the last published relating to the Bank, which consisted of excerpta out of the three parts of the Querist. I wrote to you before to procure two copies of this for his Excellency and Mr. Liddel.

Ex. 59.—Jan. 24, 1747. You asked me in your last letter, whether we had not provided a house in Cloyne for the reception and cure of sick persons. By your query it seems there is some such report: but what gave rise to it could be no more than this, viz. that we are used to lodge a few strolling sick with a poor tenant or two in Cloyne, and employ a poor woman or two to tend them, and supply them with a few necessaries from our house. This may be magnified (as things gather in the telling) into an hospital; but the truth is merely what I tell you. I wish you would send me a pamphlet political now and then, with what news you hear. Is there any apprehension of an invasion upon Ireland?

Ex. 60.—Feb. 6, 1747. Your manner of accounting for the weather seems to have reason in it. And yet there still remains something unaccountable, namely, why there should be no rain in the regions mentioned. If the bulk, figure, situation, and motion, of the earth are given, and the luminaries remain the same, should there not be a certain cycle of the seasons ever returning at certain periods? To me it seems, that the exhalations perpetually sent up from the bowels of the earth have no small share in the weather; that nitrous exhalations produce cold

and frost; and that the same causes which produce earthquakes within the earth produce storms above it. Such are the variable causes of our weather; which if it proceeded only from fixed and given causes, the changes thereof would be as regular as the vicissitudes of the days, or the return of eclipses. I have writ this extempore—*valeat quantum valere potest.*

Ex. 61.—Feb. 9, 1747. You ask me if I had no hints from England about the primacy. I can only say, that last week I had a letter from a person of no mean rank, who seemed to wonder that he could not find I had entertained any thoughts of the primacy, while so many others of our bench were so earnestly contending for it. He added, that he hoped I would not take it ill if my friends wished me in that station. My answer was, that I am so far from soliciting, that I do not even wish for it; that I do not think myself the fittest man for that high post; and that therefore I neither have nor ever will ask it.

Ex. 62.—Feb. 10, 1747. In a letter from England, which I told you came a week ago, it was said that several of our Irish bishops were earnestly contending for the primacy. Pray, who are they? I thought Bishop Stone was only talked of at present. I ask this question merely out of curiosity, and not from any interest, I assure you. I am no man's rival or competitor in this matter. I am not in love with feasts, and crowds, and visits, and late hours, and strange faces, and a hurry of affairs often insignificant. For my own private satisfaction, I had rather be master of my time than wear a diadem. I repeat these things to you, that I may not seem to have declined all steps to the primacy out of singularity, or pride, or stupidity, but from solid motives. As for the argument from the opportunity of doing good, I observe, that duty obliges men in high station not to decline occasions of doing good; but duty doth not oblige men to solicit such high stations.

Ex. 63.—Feb. 19, 1747. The ballad you sent has mirth in in it, with a political sting in the tail. But the speech of Van Haaren is excellent. I believe it Lord Chesterfield's.—We have at present, and for these two days past had, frost, and some snow. Our military men are at length sailed from Cork-harbour. We hear they are designed for Flanders.

I must desire you to make at leisure the most exact and distinct inquiry you can into the characters of the senior fellows as to their behaviour, temper, piety, parts, and learning: also to make a list of them, with each man's character annexed to his

name. I think it of so great consequence to the public to have a good provost, that I would willingly look beforehand, and stir a little to prepare an interest, or at least to contribute my mite where I properly may in favour of a worthy man to fill that post, when it shall become vacant. Dr. Hales, in a letter to me, has made very honourable mention of you to me. It would not be amiss if you should correspond with him, especially for the sake of granaries and prisons.

Ex. 64.—Feb. 20, 1747. Though the situation of the earth with respect to the sun changes, yet the changes are fixed and regular: if therefore this were the cause of the variation of the winds, the variation of winds must be regular, *i. e.* regularly returning in a cycle. To me it seems, that the variable cause of the variable winds are the subterraneous fires, which constantly burning, but altering their operation according to the various quantity or kind of combustible materials they happen to meet with, send up exhalations more or less, of this or that species, which diversely fermenting in the atmosphere produce uncertain, variable winds and tempests. This, if I mistake not, is the true solution of that crux. As to the papers about petrefactions which I sent to you and Mr. Simon, I do not well remember the contents. But be you so good as to look them over, and shew them to some others of your society. And if after this you shall think them worth publishing in your collections, you may do as you please. Otherwise I would not have things hastily and carelessly written thrust into public view.

[*The following anonymous piece, on a subject connected with the preceding, may deserve a place here. It is in the Bishop's handwriting, and seems to have been inserted in one of the London prints.*]

TO THE PUBLISHER.

SIR,

Having observed it hath been offered as a reason to persuade the public, that the late shocks felt in and about London were not caused by an earthquake, because the motion was lateral, which it is asserted the motion of an earthquake never is, I take upon me to affirm the contrary. I have myself felt an earthquake at Messina in the year 1718, when the motion was horizontal or lateral. It did no harm in that city, but threw down several houses about a day's journey from thence.

We are not to think the late shocks merely an air-quake, as they call it, on account of signs and changes in the air, such being usually observed to attend earthquakes. There is a correspondence between the subterraneous air and our atmosphere. It is probable that storms or great concussions of the air do often, if not always, owe their origin to vapours or exhalations issuing from below.

I remember to have heard Count Tezzani at Catania say, that some hours before the memorable earthquake of 1692, which overturned the whole city, he observed a line extended in the air, proceeding, as he judged, from exhalations poised and suspended in the atmosphere; also that he heard a hollow, frightful murmur about a minute before the shock. Of 25,000 inhabitants 18,000 absolutely perished; not to mention others who were miserably bruised and wounded. There did not escape so much as one single house. The streets were narrow, and the buildings high; so there was no safety in running into the streets: but on the first tremor (which happens a small space, perhaps a few minutes, before the downfal) they found it the safest way to stand under a door-case, or at the corners of the house.

The Count was dug out of the ruins of his own house, which had overwhelmed about twenty persons, only seven whereof were got out alive. Though he rebuilt his house with stone, yet he ever after lay in a small adjoining apartment made of reeds plaistered over. Catania was rebuilt more regular and beautiful than ever: the houses, indeed, are lower and the streets broader than before, for security against future shocks. By their account, the first shock seldom or never doth the mischief: but the *repliche*, as they term them, are to be dreaded. The earth, I was told, moved up and down like the boiling of a pot, *terra bollente di sotto in sopra*, to use their own expression. This sort of subsultive motion is ever accounted the most dangerous.

Pliny, in the second book of his Natural History, observes, that all earthquakes are attended with a great stillness of the air. The same was observed at Catania. Pliny further observes, that a murmuring noise precedes the earthquake. He also remarks, that there is *signum in cælo, præceditque motu futuro, aut interdiu, aut paulo post occasum sereno, ceu tenuis linea nubis in longum porrectæ spatium*: which agrees with what was observed by Count Tezzani and others at Catania. And all these things plainly shew the mistake of those who surmise that noises and

signs in the air do not belong to, or betoken, an earthquake, but only an air-quake.

The naturalist above cited, speaking of the earth, saith, that *variè quatitur*, up and down sometimes, at others from side to side. He adds, that the effects are very various: cities one while demolished, another swallowed up; sometimes overwhelmed by water, at other times consumed by fire bursting from the earth: one while the gulf remains open and yawning; another, the sides close, not leaving the least trace or sign of the city swallowed up.

Britain is an island—*maritima autem maximè quatiuntur*, saith Pliny—and in this island are many mineral and sulphureous waters. I see nothing in the *natural* constitution of London, or the parts adjacent, that should render an earthquake impossible or improbable. Whether there be any thing in the *moral* state thereof that should exempt it from that fear, I leave others to judge. I am your humble servant, A. B.

Ex. 65.—Cloyne, March 22, 1747. As to what you say that the primacy would have been a glorious thing, for my part I do not see, all things considered, the glory of wearing the name of primate in these days, or of getting so much money, a thing every tradesman in London may get if he pleases. I should not choose to be primate, in pity to my children: and for doing good to the world, I imagine I may, upon the whole, do as much in a lower station.

Ex. 66.—June 23, 1746. I perceive the Earl of Chesterfield is, whether absent or present, a friend to Ireland; and there could not have happened a luckier incident to this poor island than the friendship of such a man, when there are so few of her own great men who either care or know how to befriend her. As my own wishes and endeavours, howsoever weak and ineffectual, have had the same tendency, I flatter myself that on this score he honours me with his regard; which is an ample recompence for more public merit than I can pretend to. As you transcribed a line from his letter relating to me, so in return I send you a line from a letter of the Bishop of Gloucester's, relating to you—I formerly told you I had mentioned you to the Bishop when I sent your scheme—These are his words: "I have had a great deal of discourse with your Lord Lieutenant. He expressed his good esteem of Mr. Prior and his character, and commended him as one who had no view in life but to do the utmost good he is capable of. As he has seen the scheme, he may have opportunity of mentioning it to as many of the cabinet as he

pleases: but it will not be a fashionable doctrine at this time." So far the Bishop. You are doubtless in the right, on all proper occasions, to cultivate a correspondence with Lord Chesterfield. When you write, you will perhaps let him know in the properest manner the thorough sense I have of the honour he does me in his remembrance, and my concern at not having been able to wait on him.

Ex. 67.—July 3, 1746. I send you back my letter, with a new paragraph to be added at the end where you see the A.

Lord Chesterfield's letter does great honour both to you and his Excellency. The nation should not lose the opportunity of profiting by such a viceroy, which indeed is a rarity not to be met with every season, which grows not on every tree. I hope your society will find means of encouraging particularly the two points he recommends, glass and paper. For the former you would do well to get your workmen from Holland rather than from Bristol. You have heard of the trick the glassmen of Bristol were said to have played Dr. Helsham and company.

My wife, with her compliments, sends you a present * by the Cork carrier, who set out yesterday. It is an offering of the first-fruits of her painting. She began to draw in last November, and did not stick to it closely, but by way of amusement only at leisure hours. For my part, I think she shews a most uncommon genius: but others may be supposed to judge more impartially than I. My two younger children are beginning to employ themselves the same way. In short, here are two or three families in Imokilly † bent upon painting: and I wish it was more general among the ladies and idle people, as a thing that may divert the spleen, improve the manufactures, and increase the wealth, of the nation. We will endeavour to profit by our Lord Lieutenant's advice, and kindle up new arts with a spark of his public spirit.

Mr. Simon has wrote to me, desiring I would become a member of the Historico-Physical Society. I wish them well, but do not care to list myself among them: for in that case I should think myself obliged to do somewhat which might interrupt my other studies. I must therefore depend on you for getting me out of this scrape, and hinder Mr. Simon's proposing me, which he inclines to do at the request, it seems, of the Bishop of Meath.

* The Bishop's portrait painted by Mrs. Berkeley, now in the possession of the Rev. Mr. Archdall of Bolton-street, Dublin.

† The village of Cloyne is in the barony of Imokilly, county of Cork.

And this, with my service, will be a sufficient answer to Mr. Simon's letter.

Ex. 68.—Sept. 12, 1746. I am just returned from a tour through my diocess of one hundred and thirty miles, almost shaken to pieces. What you write of Bishop Stone's preferment is highly probable. For myself, though his Excellency the Lord Lieutenant might have a better opinion of me than I deserved, yet it was not likely that he would make an Irishman primate. The truth is, I have a scheme of my own for this long time past, in which I propose more satisfaction and enjoyment of myself than I could in that high station, which I neither solicited nor so much as wished for. It is true, the primacy or archbishoprick of Dublin, if offered, might have tempted me by a greater opportunity of doing good: but there is no other preferment in the kingdom to be desired on any other account than a greater *income*, which would not tempt me to remove from Cloyne, and set aside my Oxford scheme, on which, though delayed by the illness of my son, yet I am as intent and as much resolved as ever.

Ex. 69.—Feb. 2, 1749. Three days ago we received the box of pictures. The two men's heads with ruffs are well done; the third is a copy and ill coloured: they are all Flemish: so is the woman, which is also very well painted, though it hath not the beauty and freedom of an Italian pencil. The two Dutch pictures, containing animals, are well done as to the animals; but the human figures and sky are ill done. The two pictures of ruins are very well done, and are Italian. My son William * had already copied two other pictures of the same kind, and by the same hand. He and his sister are both employed in copying pictures at present; which shall be dispatched as soon as possible; after which they will set about some of yours. Their stint, on account of health, is an hour and a half a day for painting. So I doubt two months will not suffice for copying: but no time shall be lost, and great care taken of your pictures, for which we hold ourselves much obliged.—Our round tower stands where it did; but a little stone arched vault on the top was cracked, and must be repaired: the bell also was thrown down, and broke its way through three boarded stories, but remains entire. The door was shivered into many small pieces and dispersed, and there was a stone forced out of the wall. The whole damage, it is

* A fine youth, the second son of the Bishop, whose loss at an early age was thought to have stuck too close to his father's heart.

thought, will not amount to 20*l.* The thunder-clap was by far the greatest that I ever heard in Ireland.

Ex. 70.—March 30, 1751. They are going to print at Glasgow two editions at once, in 4to and in folio, of all Plato's works, in most magnificent types. This work should be encouraged: it would be right to mention it as you have opportunity.*

To the Rev. Mr. ARCHDALL, Bolton-street, Dublin.

REV. SIR, Cloyne, Dec. 8, 1751.

This is to desire you may publish the inscription I sent you in Faulkner's paper. But say nothing of the author. I must desire you to cause the letters G. B. being the initial letters of my name, to be engraved on the die of the gold medal, at the bottom, beneath the race-horse: whereby mine will be distinguished from medals given by others.

TO THE SAME.

Dec. 22, 1751. I thank you for the care you have taken in publishing the inscription so correctly, as likewise for your trouble in getting G. B. engraved on the plain at the bottom of the medal. When that is done, you may order two medals to be made, and given as usual. I would have only two made by my die: the multiplying of premiums lessens their value. If my inscription is to take place, let me know before it is engraved: I may perhaps make some trifling alteration.

[No date: but sent at this time to the same.] For the particulars of your last favour I give you thanks. I send the above bill to clear what you have expended on my account, and also ten guineas beside, which is my contribution towards the monument which I understand is intended for our deceased friend. Yesterday, though ill of the cholic, yet I could not forbear sketching out the enclosed. I wish it did justice to his character. Such as it is, I submit it to you and your friends.

* Mr. Prior died the 21st of October following, aged 71. The inscription mentioned in the next article was for his monument in Christchurch cathedral, erected at the expense of Mr. Prior's friends and admirers.

Enclosed in the last:
Memoriæ sacrum
THOMÆ PRIOR
Viri, si quis unquam alius, de patriâ
optimè meriti:
Qui, cum prodesse mallet quàm conspici,
nec in senatum cooptatus
nec consiliorum aulæ particeps
nec ullo publico munere insignitus
rem tamen publicam
mirificè auxit et ornavit
auspiciis, consiliis, labore indefesso:
Vir innocuus, probus, pius
partium studiis minimè addictus
de re familiari parum solicitus
cum civium commoda unicè spectaret
Quicquid vel ad inopiæ levamen
vel ad vitæ elegantiam facit
quicquid ad desidiam populi vincendam
aut ad bonas artes excitandas pertinet
id omne pro virili excoluit
Societatis Dubliniensis
auctor, institutor, curator:
Quæ fecerit
pluribus dicere haud refert:
quorsum narraret marmor
illa quæ omnes norunt
illæ quæ civium animis insculpta
nulla dies delebit?

This monument was erected to Thomas Prior, Esquire, at the charge of several persons who contributed to honour the memory of that worthy patriot, to whom his own actions and unwearied endeavours in the service of his country have raised a monument more lasting than marble.

Jan. 7, 1752. I here send you enclosed the inscription, with my last amendments. In the printed copy *siquis* was one word: it had better be two, divided, as in this. Thereare some other small changes which you will observe. The Bishop of Meath was for having somewhat in English: accordingly I sujboin an English addition, to be engraved in a different character and in

continued lines (as it is written) beneath the Latin. The Bishop writes, that contributions come in slowly, but that near one hundred guineas are got. Now it should seem that if the first plan, rated at two hundred guineas, was reduced or altered, there might be a plain neat monument erected for one hundred guineas, and so (as the proverb directs) the coat be cut according to the cloth.

To the Rev. Mr. GERVAIS, sen.

Cloyne, Nov. 25, 1738. Rev. Sir, my wife sends her compliments to Mrs. Gervais and yourself for the receipt, &c. and we both concur in thanks for your venison. The rain hath so defaced your letter, that I cannot read some parts of it. But I can make a shift to see there is a compliment of so bright a strain, that if I knew how to read it, I am sure I should not know how to answer it. If there was any thing agreeable in your entertainment at my house, it was chiefly owing to yourself, and so requires my acknowledgment, which you have very sincere. You give so much pleasure to others, and are so easily pleased yourself, that I shall live in hopes of your making my house your inn whenever you visit these parts, which will be very agreeable to, &c.

Jan. 12, 1742. You forgot to mention your address; else I should have sooner acknowledged the favour of your letter, for which I am much obliged, though the news it contained had nothing good but the manner of telling it. I had much rather write you a letter of congratulation than of comfort: and yet I must needs tell you for your comfort, that I apprehend you miscarry by having too many friends. We often see a man with one only at his back pushed on and making his way, while another is embarrassed in a crowd of well-wishers. The best of it is, your merits will not be measured by your success. It is an old remark, that the race is not always to the swift. But at present who wins it, matters little: for all protestant clergyman are like soon to be at par, if that old priest* your countryman continues to carry on his schemes with the same policy and success he has hitherto done. The accounts you send agree with what I hear from other parts: they are all alike dismal. Reserve yourself however for future times, and mind the main chance. I would

* Cardinal Fleuri, then eighty-seven years old. Dean Gervais was a native of Montpelier, who was carried an infant out of France on the revocation of the edict of Nantz in 1680.

say, shun late hours, drink tar-water, and bring back (I wish a good deanery, but at least) a good stock of health and spirits to grace our little parties in Imokilly, where we hope, ere it be long, to see you and the sun returned together. My wife, who values herself on being in the number of your friends, is extremely obliged for the Italian psalms you have procured, and desires me to tell you, that the more you can procure, the more she shall be obliged. We join in wishing you many happy new years, health, and success.

Feb. 2, 1742. I condole with you on your cold, a circumstance that a man of fashion who keeps late hours can hardly escape. We find here that a spoonful, half tar and half honey, taken morning, noon, and night, proves a most effectual remedy in that case. My wife, who values herself on being in your good graces, expresses great gratitude for your care in procuring the psalms, and is doubly pleased with the prospect of your being yourself the bearer. The instrument she desired to be provided was a large four-stringed bass violin: but besides this we shall also be extremely glad to get that excellent bass viol which came from France, be the number of strings what it will. I wrote indeed (not to overload you) to Dean Browne * to look out for a six-stringed bass viol of an old make and mellow tone. But the more we have of good instruments, the better: for I have got an excellent master whom I have taken into my family, and all my children, not excepting my little daughter, learn to play, and are preparing to fill my house with harmony against all events: that if we have worse times, we may have better spirits. Our French woman is grown more attentive to her business, and so much altered for the better, that my wife is not now inclined to part with her: but is nevertheless very sensibly obliged by your kind offer to look out for another. What you say of a certain pamphlet is enigmatical: I shall hope to have it explained *viva voce*. As this corner furnishes nothing worth sending, you will pardon me if instead of other news I transcribe a paragraph of a letter I lately received from an English bishop. "We are now shortly to meet again in parliament, and by the proceedings upon the state of the nation Sir Robert's fate will be determined. He is doing all he can to recover a majority in the House of Commons,

* Jemmat Brown was then dean of Rosse, bishop of Killaloe in 1743, of Dromore in 1745, of Cork the same year, of Elphin in 1772, and archbishop of Tuam in 1775: died in 1782.

and is said to have succeeded as to some particulars. But as his main attempt, which was that of uniting the Prince and his court to the King's, he has been foiled. The Bishop of Oxford* was employed to carry the proposal to the Prince, which was, that he should have the 100,000*l.* a year he had demanded, and his debts paid. But the Prince, at the same time that he expressed the utmost respect and duty to his Majesty, declared so much distaste to his Minister, that without his removal he will hearken to no terms." I have also had another piece in the following words, which is very agreeable. "Lady Dorothy,† whose good temper seems as great as her beauty, and who has gained on every one by her behaviour in these most unhappy circumstances, is said at last to have gained over Lord Euston, and to have entirely won his affection." I find by your letter, the reigning distemper at the Irish court is disappointment. A man of less spirits and alacrity would be apt to cry out, *Spes et fortuna valete*, &c. but my advice is, never to quit your hopes. Hope is often better than enjoyment. Hope is often the cause as well as the effect of youth. It is certainly a very pleasant and healthy passion. A hopeless person is deserted by himself: and he who forsakes himself is soon forsaken by friends and fortune, both which are sincerely wished you by, &c.

March 5, 1742. Your last letter, containing an account of the Queen of Hungary and her affairs, was all over agreeable. My wife and I are not a little pleased to find her situation so much better than we expected, and greatly applaud your zeal for her interests; though we are divided upon the motive of it. She imagines you would be less zealous, were the Queen old and ugly; and will have it that her beauty has set you on fire even at this distance. I on the contrary affirm, that you are not made of such combustible stuff; that you are affected only by the love of justice, and insensible to all other flames than those of patriotism. We hope soon for your presence at Cloyne to put an end to this controversy.—Your care in providing the Italian psalms set to music, the four-stringed bass violin, and the antique bass viol, require our repeated thanks. We have already a bass viol made in Southwark A. D. 1730, and reputed the best in England. And through your means we are possessed of the best in France. So we have a fair chance for having the two best in Europe.—Your letter gives me hopes of a new and prosperous scene. We live in

* Secker. † Lady Dorothy Boyle, daughter of the Earl of Burlington, and wife to Lord Euston, son of the Duke of Grafton.

an age of revolutions so sudden and surprising in all parts of Europe, that I question whether the like has been ever known before. Hands are changed at home: it is well if measures are so too. If not, I shall be afraid of this change of hands; for hungry dogs bite deepest. But let those in power look to this. We behold these vicissitudes with an equal eye from this serene corner of Cloyne, where we hope soon to have the perusal of your budget of politics. Mean time accept our service and good wishes.

Sept. 6, 1743. The book which you were so good as to procure for me (and which I shall not pay for till you come to receive the money in person) contains all that part of Dr. Pococke's travels for which I have any curiosity: so I shall, with my thanks for this, give you no further trouble about any other volume.—I find by the letter put into my hands by your son (who was so kind as to call here yesterday, but not kind enough to stay a night with us), that you are taken up with great matters, and, like other great men, in danger of overlooking your friends. Prepare however for a world of abuse, both as a courtier and an architect, if you do not find means to wedge in a visit to Cloyne between those two grand concerns. Courtiers you will find none here, and but such virtuosi as the country affords; I mean the way of music, for that is present the reigning passion at Cloyne. To be plain, we are musically mad. If you would know what that is, come and see.

Oct. 29, 1743. A bird of the air has told me that your reverence is to be dean of Tuam. No nightingale could have sung a more pleasing song, not even my wife, who, I am told, is this day inferior to no singer in the kingdom. I promise you we are preparing no contemptible chorus to celebrate your preferment: and if you do not believe me, come this Christmas, and believe your own ears. In good earnest, none of your friends will be better pleased to see you with your broad seal in your pocket than your friends at Cloyne. I wish I were able to wish you joy at Dublin; but my health, though not a little mended, suffers me to make no excursions farther than a mile or two.—What is this your favourite the Queen of Hungary has been doing by her emissaries at Petersburgh? France is again upon her legs. I foresee no good. I wish all this may be vapour and spleen: but I write in sunshine.

Jan. 8, 1744. You have obliged the ladies as well as myself by your candid judgment on the point submitted to your determination. I am glad this matter proved an amusement in your gout, by bringing you acquainted with several curious and select

trials,* which I should readily purchase, and accept your kind offer of procuring them, if I did not apprehend there might be some among them of too delicate a nature to be read by boys and girls, to whom my library, and particularly all French books, are open.—As to foreign affairs, we cannot descry or prognosticate any good event from this remote corner. The planets that seemed propitious are now retrograde: Russia, Sweden, and Prussia, lost; and the Dutch a nominal ally at best. You may now admire the Queen of Hungary without a rival: her conduct with respect to the Czarina and the Marquis de Botta hath, I fear, rendered cold the hearts of her friends, and their hands feeble. To be plain, from this time forward I doubt we shall languish, and our enemies take heart. And while I am thus perplexed about foreign affairs, my private economy (I mean the animal economy) is disordered by the sciatica; an evil which has attended me for some time past; and I apprehend will not leave me till the return of the sun.—Certainly the news that I want to hear at present is not from Rome or Paris, or Vienna, but from Dublin; viz. when the Dean of Tuam is declared, and when he receives the congratulations of his friends. I constantly read the news from Dublin; but lest I should overlook this article, I take upon me to congratulate you at this moment; that as my good wishes were not, so my compliments may not be behind those of your other friends.—You have entertained me with so many curious things, that I would fain send something in return worth reading. But as this quarter affords nothing from itself, I must be obliged to transcribe a bit of an English letter that I received last week. It relates to what is now the subject of public attention, the Hanover troops, and is as follows: "General Campbell (a thorough courtier) being called upon in the House of Commons to give an account whether he had not observed some instances of partiality, replied, he could not say he had: but this he would say, that he thought the forces of the two nations could never draw together again. This, coming from the mouth of a courtier, was looked upon as an ample confession: however, it was carried against the address by a large majority. Had the question been whether the Hanover troops should be continued, it would not have been a debate: but it being well known that the contrary had been resolved upon be-

* Collection of Trials in France, published under the title of *Causes Celebres*.

fore the meeting of parliament, the moderate part of the opposition thought it was unnecessary, and might prove hurtful to address about it, and so voted with the court." You see how I am forced to lengthen out my letter by adding a borrowed scrap of news, which yet probably is no news to you. But though I should shew you nothing new, yet you must give me leave to shew my inclination at least to acquit myself of the debts I owe you, and to declare myself, &c.

March 16, 1744. I think myself a piece of a prophet when I foretold that the Pretender's Cardinal feigned to aim at your head, when he meant to strike you, like a skilful fencer, on the ribs. It is true, one would hardly think the French such bunglers: but this popish priest hath manifestly bungled so as to repair the breaches our own bunglers had made at home. This is the luckiest thing that could have happened, and will, I hope, confound all the measures of our enemies.—I was much obliged and delighted with the good news you lately sent, which was yesterday confirmed by letters from Dublin. And though particulars are not yet known, I did not think fit to delay our public marks of joy, as a great bonfire before my gate, firing of guns, drinking of healths, &c. I was very glad of this opportunity to put a little spirit into our drooping protestants of Cloyne, who have of late conceived no small fears on seeing themselves in such a defenceless condition among so great a number of papists elated with the fame of these new enterprises in their favour. It is indeed terrible to reflect, that we have neither arms nor militia in a province where the papists are eight to one, and have an earlier intelligence than we have of what passes: by what means I know not; but the fact is certainly true.—Good Mr. Dean (for Dean I will call you, resolving not be behind your friends in Dublin), you must know, that to us who live in this remote corner many things seem strange and unaccountable that may be solved by you who are near the fountain head. Why are draughts made from our forces when we most want them? Why are not the militia arrayed? How comes it to pass that arms are not put into the hands of protestants, especially since they have been so long paid for? Did not our ministers know for a long time past that a squadron was forming at Brest? Why did they not then bruise the cockatrice in the egg? Would not the French works at Dunkirk have justified this step? Why was Sir John Norris called off from the chace when he had his enemies in full view, and was even at their heels with a superior force? As

we have two hundred and forty men-of-war, whereof one hundred and twenty are of the line, how comes it that we did not appoint a squadron to watch and intercept the Spanish Admiral with his thirty millions of pieces of eight? In an age wherein articles of religious faith are canvassed with the utmost freedom, we think it lawful to propose these scruples in our political faith, which in many points wants to be enlightened and set right.—Your last was wrote by the hand of a fair lady, to whom both my wife and I send our compliments as well as to yourself: I wish you joy of being able to write yourself. My cholic is changed to gout and sciatica, the tar-water having drove it into my limbs, and as I hope, carrying it off by those ailments, which are nothing to the cholic.

Jan. 6, 1745.—Two days ago I was favoured with a very agreeable visit from Baron Mountenay and Mr. Bristow. I hear they have taken Lismore in their way to Dublin.—We want a little of your foreign fire to raise our Irish spirits in this heavy season. This makes your purpose of coming very agreeable news. We will chop politics together, sing *Io Pæan* to the Duke, revile the Dutch, admire the King of Sardinia, and applaud the Earl of Chesterfield, whose name is sacred all over this island except Lismore; and what should put your citizens of Lismore out of humour with his Excellency I cannot comprehend. But the discussion of these points must be deferred to your wished-for arrival.

Feb. 6, 1745. You say you carried away regret from Cloyne. I assure you that you did not carry it all away: there was a good share of it left with us: which was on the following newsday increased upon hearing the fate of your niece. My wife could not read this piece of news without tears, though her knowledge of that amiable young lady was no more than one day's acquaintance. Her mournful widower is beset with many temporal blessings: but the loss of such a wife must be long felt through them all. Complete happiness is not to be hoped for on this side Gascony. All those who are not Gascons must have a corner of woe to creep out at, and to comfort themselves with at parting from this world. Certainly if we had nothing to make us uneasy here, heaven itself would be less wished for. But I should remember I am writing to a philosopher and divine; so shall turn my thoughts to politics, concluding with this sad reflection, that, happen what will, I see the Dutch are still to be favourites, though I much apprehend the hearts of some warm

friends may be lost at home, by endeavouring to gain the affections of those lukewarm neighbours.

June 3, 1745. I congratulate with you on the success of your late dose of physic. The gout, as Dr. Sydenham styles it, is *amarissimum naturæ pharmacum*. It throws off a sharp excrement from the blood to the limbs and extremities of the body, and is no less useful than painful. I think, Mr. Dean, you have paid for the gay excursion you made last winter to the metropolis and the court. And yet, such is the condition of mortals, I foresee you will forget the pain next winter, and return to the same course of life which brought it on.—As to our warlike achievements, if I were to rate our successes by our merits, I could forebode little good. But if we are sinners, our enemies are no saints. It is my opinion we shall heartily maul one another, without any signal advantage on either side. How the sullen English squires who pay the piper will like this dance, I cannot tell. For my own part I cannot help thinking, that land-expeditions are but ill suited either to the force or interest of England; and that our friends would do more, if we did less, on the continent.—Were I to send my son from home, I assure you there is no one to whose prudent care and good nature I would sooner trust him than yours. But as I am his physician, I think myself obliged to keep him with me. Besides, as after so long an illness his constitution is very delicate, I imagine this warm vale of Cloyne is better suited to it than your lofty and exposed situation of Lismore. Nevertheless, my wife and I are extremely obliged by your kind offer, and concur in our hearty thanks for it.

Nov. 24, 1745. You are in for life. Not all the philosophers have been saying these three thousand years on the vanity of riches, the cares of greatness, and the brevity of human life, will be able to reclaim you. However, as it is observed that most men have patience enough to bear the misfortunes of others, I am resolved not to break my heart for my old friend, if you should prove so unfortunate as to be made a bishop.—The reception you met with from Lord Chesterfield was perfectly agreeable to his Excellency's character, who being so *clair-voyant* in every thing else could not be supposed blind to your merit.—Your friends the Dutch have shewed themselves, what I always took them to be, selfish and ungenerous. To crown all, we are now told the forces they sent us have private orders not to fight: I hope we shall not want them.—By the letter you favoured me

with I find the regents of our university have shewn their loyalty at the expense of their wit. The poor dead Dean,* though no idolater of the whigs, was no more a Jacobite than Dr. Baldwin. And had he been even a papist, what then? Wit is of no party.—We have been alarmed with a report that a great body of rapparees is up in the county of Kilkenny: these are looked on by some as the forerunners of an insurrection. In opposition to this, our militia have been arrayed, that is, sworn: but alas! we want not oaths, we want muskets. I have bought up all I could get, and provided horses and arms for four-and-twenty of the protestants of Cloyne, which, with a few more that can furnish themselves, make up a troop of thirty horse. This seemed necessary to keep off rogues in these doubtful times.—May we hope to gain a sight of you in the recess? Were I as able to go to town, how readily should I wait on my Lord Lieutenant and the Dean of Tuam. Your letters are so much tissue of gold and silver: in return I am forced to send you from this corner a patch-work of tailors' shreds, for which I entreat your compassion, and that you will believe me, &c.

Feb. 24, 1746. I am heartily sensible of your loss, which yet admits of alleviation, not only from the common motives which have been repeated every day for upwards of five thousand years, but also from your own peculiar knowledge of the world and the variety of distresses which occur in all ranks from the highest to the lowest: I may add too, from the peculiar times in which we live, which seem to threaten still more wretched and unhappy times to come.

> Ætas parentum pejor avis tulit
> Nos nequiores, mox daturos
> Progeniem vitiosiorem.

Nor is it a small advantage that you have a peculiar resource against distress from the gaiety of your own temper. Such is the

* Immediately after Dean Swift's death, the class of senior sophisters in the college of Dublin determined to apply a sum of money raised among themselves, and usually expended on an entertainment, to the purpose of honouring the memory of that great man by a bust to be set up in the college library. Provost Baldwin, being a staunch whig, and having once smarted by an epigram of the Dean's, it was confidently thought, would have refused his consent to this measure, and the talk of the town about this time was, that the board of senior fellows would enter implicitly into the same sentiments. But the event soon proved the falschood of such an unworthy report: the bust was admitted without the least opposition, and is now in the library.

hypochondriac melancholy complexion of us islanders, that we seem made of butter, every accident makes such a deep impression upon us; but those elastic spirits, which are your birthright, cause the strokes of fortune to rebound without leaving a trace behind them; though, for a time, there is and will be a gloom, which, I agree with your friends, is best dispelled at the court and metropolis, amidst a variety of faces and amusements. I wish I was able to go with you, and pay my duty to the Lord Lieutenant: but, alas! the disorder I had this winter, and my long retreat, have disabled me for the road, and disqualified me for a court. But if I see you not in Dublin, which I wish I may be able to do, I shall hope to see you at Cloyne when you can be spared from better company. These sudden changes and tossings from side to side betoken a fever in the state. But whatever ails the body politic, take care of your own bodily health, and let no anxious cares break in upon it.

Nov. 8, 1746. Your letter, with news from the castle, found me in bed, confined by the gout. In answer to which news I can only say, that I neither expect nor wish for any dignity higher than what I am encumbered with at present.—That which more nearly concerns me is my credit, which I am glad to find so well supported by Admiral Lestock. I had promised you that before the first of November he would take King Lewis by the beard. Now Quimpercorrentin, Quimperlay, and Quimperen, being certain extreme parts or excrescences of his kingdom, may not improperly be styled the beard of France. In proof of his having been there, he has plundered the wardrobes of the peasants, and imported a great number of old petticoats, waistcoats, wooden shoes, and one shirt, all which are actually sold at Cove: the shirt was bought by a man of this town for a groat. And if you wont believe me, come and believe your own eyes. In case you doubt either the facts or the reasonings, I am ready to make them good, being now well on my feet, and longing to triumph over you at Cloyne, which I hope will be soon.

April 6, 1752. Your letter by last post was very agreeable: but the trembling hand with which it was written is a draw-back from the satisfaction I should otherwise have had in hearing from you. If my advice had been taken, you would have escaped so many miserable months in the gout and the bad air of Dublin. But advice against inclination is seldom successful. Mine was very sincere, though I must own a little interested: for we often wanted your enlivening company to dissipate the gloom

of Cloyne. This I look on as enjoying France at second hand. I wish any thing but the gout could fix you among us. But bustle and intrigue, and great affairs, have and will, as long as you exist on this globe, fix your attention. For my own part, I submit to years and infirmities. My views in this world are mean and narrow: it is a thing in which I have small share, and which ought to give me small concern. I abhor business, and especially to have to do with great persons and great affairs, which I leave to such as you, who delight in them and are fit for them. The evening of life I choose to pass in a quiet retreat. Ambitious projects, intrigues, and quarrels of statesmen, are things I have formerly been amused with; but they now seem to be a vain fugitive dream. If you thought as I do, we should have more of your company, and you less of the gout. We have not those transports of you castle-hunters; but our lives are calm and serene. We do, however, long to see you open your budget of politics by our fire-side. My wife and all here salute you, and send you, instead of compliments, their best sincere wishes for your health and safe return. The part you take in my son's recovery is very obliging to us all, and particularly to, &c.

G. CLOYNE.

A

TREATISE

CONCERNING THE

PRINCIPLES

OF

HUMAN KNOWLEDGE,

WHEREIN THE

RF CAUSES OF RRROR AND DIFFICULTY IN THE SCIENCES, WITH THR GROUNDS OF SCEPTICISM, ATHEISM, AND IRRELIGION, ARE INQUIRED INTO.

INTRODUCTION.

I. Philosophy being nothing else but the study of wisdom and truth, it may with reason be expected, that those who have spent most time and pains in it, should enjoy a greater calm and serenity of mind, a greater clearness and evidence of knowledge, and be less disturbed with doubts and difficulties, than other men; yet so it is we see the illiterate bulk of mankind that walk the high-road of plain common sense, and are governed by the dictates of nature, for the most part easy and undisturbed. To them nothing that is familiar appears unaccountable or difficult to comprehend. They complain not of any want of evidence in their senses, and are out of all danger of becoming *sceptics*. But no sooner do we depart from sense and instinct to follow the light of a superior principle, to reason, meditate, and reflect, on the nature of things, but a thousand scruples spring up in our minds, concerning those things which before we seemed fully to comprehend. Prejudices and errors of sense do from all parts discover themselves to our view; and, endeavouring to correct these by reason, we are insensibly drawn into uncouth paradoxes, difficulties, and inconsistencies, which multiply and grow upon us as we advance in speculation; till at length, having wandered through many intricate mazes, we find ourselves just where we were, or, which is worse, sit down in a forlorn scepticism.

II. The cause of this is thought to be the obscurity of things, or the natural weakness and imperfection of our understandings. It is said, the faculties we have

are few, and those designed by nature for the support and comfort of life, and not to penetrate into the inward essence and constitution of things. Besides, the mind of man being finite, when it treats of things which partake of infinity, it is not to be wondered at, if it run into absurdities and contradictions; out of which it is impossible it should ever extricate itself, it being of the nature of infinite not to be comprehended by that which is finite.

III. But perhaps we may be too partial to ourselves in placing the fault originally in our faculties, and not rather in the wrong use we make of them. It is a hard thing to suppose, that right deductions from true principles should ever end in consequences which cannot be maintained or made consistent. We should believe that God has dealt more bountifully with the sons of men, than to give them a strong desire for that knowledge which he had placed quite out of their reach. This were not agreeable to the wonted, indulgent methods of Providence, which, whatever appetites it may have implanted in the creatures, doth usually furnish them with such means as, if rightly made use of, will not fail to satisfy them. Upon the whole, I am inclined to think, that the far greater part, if not all, of those difficulties which have hitherto amused philosophers, and blocked up the way to knowledge, are entirely owing to ourselves. That we have first raised a dust, and then complain we cannot see.

IV. My purpose therefore is, to try if I can discover what those principles are which have introduced all that doubtfulness and uncertainty, those absurdities and contradictions, into the several sects of philosophy; insomuch that the wisest men have thought our ignorance incurable, conceiving it to arise from the natural dulness and limitation of our faculties. And surely it is a work well deserving our pains, to make a strict inquiry concerning the first principles of *human knowledge*, to

sift and examine them on all sides: especially since there may be some grounds to suspect that those lets and difficulties, which stay and embarrass the mind in its search after truth, do not spring from any darkness and intricacy in the objects, or natural defect in the understanding, so much as from false principles which have been insisted on, and might have been avoided.

V. How difficult and discouraging soever this attempt may seem, when I consider how many great and extraordinary men have gone before me in the same designs; yet I am not without some hopes, upon the consideration that the largest views are not always the clearest, and that he who is short-sighted will be obliged to draw the object nearer, and may, perhaps, by a close and narrow survey, discern that which had escaped far better eyes.

VI. In order to prepare the mind of the reader for the easier conceiving what follows, it is proper to premise somewhat, by way of introduction, concerning the nature and abuse of language. But the unravelling this matter leads me in some measure to anticipate my design, by taking notice of what seems to have had a chief part in rendering speculation intricate and perplexed, and to have occasioned innumerable errors and difficulties in almost all parts of knowledge. And that is the opinion that the mind hath a power of framing *abstract ideas* or notions of things. He who is not a perfect stranger to the writings and disputes of philosophers, must needs acknowledge that no small part of them is spent about abstract ideas. These are, in a more especial manner, thought to be the object of those sciences which go by the names of *logic* and *metaphysics*, and of all that which passes under the notion of the most abstracted and sublime learning, in all which one shall scarcely find any question handled in such a manner, as does not suppose their existence in the mind, and that it is well acquainted with them.

VII. It is agreed on all hands, that the qualities or

modes of things do never really exist each of them apart by itself, and separated from all others, but are mixed, as it were, and blended together, several in the same object. But we are told, the mind being able to consider each quality singly, or abstracted from those other qualities with which it is united, does by that means frame to itself abstract ideas. For example, there is perceived by sight an object extended, coloured, and moved: this mixed or compound idea the mind resolving into its simple, constituent parts, and viewing each by itself, exclusive of the rest, does frame the abstract ideas of extension, colour, and motion. Not that it is possible for colour or motion to exist without extension; but only that the mind can frame to itself by *abstraction* the idea of colour exclusive of extension, and of motion exclusive of both colour and extension.

VIII. Again, the mind having observed that in the particular extensions perceived by sense, there is something common and alike in all, and some other things peculiar, as this or that figure or magnitude, which distinguish them one from another; it considers apart or singles out by itself that which is common, making thereof a most abstract idea of extension, which is neither line, surface, nor solid, nor has any figure or magnitude, but is an idea entirely prescinded from all these. So likewise the mind, by leaving out of the particular colours perceived by sense that which distinguishes them one from another, and retaining that only which is common to all, makes an idea of colour in abstract which is neither red, nor blue, nor white, nor any other determinate colour. And in like manner, by considering motion abstractedly not only from the body moved, but likewise from the figure it describes, and all particular directions and velocities, the abstract idea of motion is framed; which equally corresponds to all particular motions whatsoever that may be perceived by sense.

IX. And as the mind frames to itself abstract ideas

of qualities or modes, so does it, by the same precision or mental separation, attain abstract ideas of the more compounded beings, which include several coexistent qualities. For example, the mind having observed that Peter, James, and John, resemble each other, in certain common agreements of shape and other qualities, leaves out of the complex or compounded idea it has of Peter, James, and any other particular man, that which is peculiar to each, retaining only what is common to all; and so makes an abstract idea wherein all the particulars equally partake, abstracting entirely from and cutting off all those circumstances and differences, which might determine it to any particular existence. And after this manner it is said we come by the abstract idea of *man*, or, if you please, humanity or human nature; wherein it is true there is included colour, because there is no man but has some colour, but then it can be neither white, nor black, nor any particular colour; because there is no one particular colour wherein all men partake. So likewise there is included stature, but then it is neither tall stature nor low stature, nor yet middle stature, but something abstracted from all these. And so of the rest. Moreover, there being a great variety of other creatures that partake in some parts, but not all, of the complex idea of *man*, the mind leaving out those parts which are peculiar to men, and retaining those only which are common to all the living creatures, frameth the idea of *animal*, which abstracts not only from all particular men, but also all birds, beasts, fishes, and insects. The constituent parts of the abstract idea of animal are body, life, sense, and spontaneous motion. By *body* is meant, body without any particular shape or figure, there being no one shape or figure common to all animals, without covering, either of hair, or feathers, or scales, &c. nor yet naked: hair, feathers, scales, and nakedness, being the distinguishing properties of particular animals, and for that reason left out of the *ab-*

stract idea. Upon the same account the spontaneous motion must be neither walking, nor flying, nor creeping: it is nevertheless a motion, but what that motion is it is not easy to conceive.

X. Whether others have this wonderful faculty of *abstracting their ideas*, they best can tell; for myself, I find indeed I have a faculty of imagining, or representing to myself the ideas of those particular things I have perceived, and of variously compounding and dividing them. I can imagine a man with two heads, or the upper parts of a man joined to the body of a horse. I can consider the hand, the eye, the nose, each by itself abstracted or separated from the rest of the body. But then whatever hand or eye I imagine, it must have some particular shape and colour. Likewise the idea of man that I frame to myself, must be either of a white, or a black, or a tawny, a straight or a crooked, a tall or a low, or a middle-sized man. I cannot by any effort of thought conceive the abstract idea above described. And it is equally impossible for me to form the abstract idea of motion distinct from the body moving, and which is neither swift nor slow, curvilinear nor rectilinear; and the like may be said of all other abstract general ideas whatsoever. To be plain, I own myself able to abstract in one sense, as when I consider some particular parts or qualities separated from others, with which, though they are united in some object, yet it is possible they may really exist without them. But I deny that I can abstract one from another, or conceive separately, those qualities which it is impossible should exist so separated; or that I can frame a general notion by abstracting from particulars in the manner aforesaid. Which two last are the proper acceptations of *abstraction.* And there are grounds to think most men will acknowledge themselves to be in my case. The generality of men which are simple and illiterate never pretend to *abstract notions.* It is said, they are difficult, and not to be attained without pains and

study. We may therefore reasonably conclude, that, if such there be, they are confined only to the learned.

XI. I proceed to examine what can be alleged in defence of the doctrine of abstraction, and try if I can discover what it is that inclines the men of speculation to embrace an opinion so remote from common sense as that seems to be. There has been a late deservedly-esteemed philosopher, who no doubt has given it very much countenance, by seeming to think, the having abstract general ideas is what puts the widest difference in point of understanding betwixt man and beast. "The having of general ideas (saith he) is that which puts a perfect distinction betwixt man and brutes, and is an excellency which the faculties of brutes do by no means attain unto. For it is evident we observe no footsteps in them of making use of general signs for universal ideas; from which we have reason to imagine that they have not the faculty of *abstracting* or making general ideas, since they have no use of words or any other general signs." And a little after: "Therefore I think, we may suppose that it is in this that the species of brutes are discriminated from men; and it is that proper difference wherein they are wholly separated, and which at last widens to so wide a distance. For if they have any ideas at all, and are not bare machines (as some would have them), we cannot deny them to have some reason. It seems as evident to me that they do some of them in certain instances reason as that they have sense, but it is only in particular ideas, just as they receive them from their senses. They are the best of them tied up within those narrow bounds, and have not (as I think) the faculty to enlarge them by any kind of *abstraction*." *Essay on Human Understanding*, b. ii. c. xi. sect. x. and xi. I readily agree with this learned author, that the faculties of brutes can by no means attain to *abstraction*. But then if this be made the distinguishing property of that sort of animals, I fear a great many of those that pass for men must be reck-

oned into their number. The reason that is here assigned why we have no grounds to think brutes have abstract general ideas, is, that we observe in them no use of words or any other general signs; which is built on this supposition, to wit, that the making use of words, implies the having general ideas. From which it follows, that men who use language are able to abstract or generalize their ideas. That this is the sense and arguing of the author will further appear by his answering the question he in another place puts: "Since all things that exist are only particulars, how come we by general terms?" His answer is, "Words become general by being made the signs of general ideas." *Essay on Human Understanding*, b. iii. c. iii. sect. vi. But it seems that a word becomes general by being made the sign not of an abstract general idea, but of several particular ideas, any one of which it differently suggests to the mind. For example, when it is said *the change of motion is proportional to the impressed force*, or that *whatever has extension is divisible*; these proportions are to be understood of motion and extension in general, and nevertheless it will not follow that they suggest to my thoughts an idea of motion without a body moved, or any determinate direction and velocity, or that I must conceive an abstract general idea of extension, which is neither line, surface nor solid, neither great nor small, black, white, nor red, nor of any other determinate colour. It is only implied, that whatever motion I consider, whether it be swift or slow, perpendicular, horizontal, or oblique, or in whatever object, the axiom concerning it holds equally true. As does the other of every particular extension, it matters not whether line, surface, or solid, whether of this or that magnitude or figure.

XII. By observing how ideas become general, we may the better judge how words are made so. And here it is to be noted, that I do not deny absolutely there are general ideas, but only that there are any *abstract*

general ideas: for in the passages above quoted, wherein there is mention of general ideas, it is always supposed that they are formed by *abstraction*, after the manner set forth in sect. viii. and ix. Now if we will annex a meaning to our words, and speak only of what we can conceive, I believe we shall acknowledge, that an idea, which considered in itself is particular, becomes general, by being made to represent or stand for all other particular ideas of the same sort. To make this plain by an example, suppose a geometrician is demonstrating the method of cutting a line in two equal parts. He draws, for instance, a black line of an inch in length, this which in itself is a particular line is nevertheless with regard to its signification general, since, as it is there used, it represents all particular lines whatsoever; so that what is demonstrated of it is demonstrated of all lines, or, in other words, of a line in general. And as that particular line becomes general by being made a sign, so the name *line*, which taken absolutely is particular, by being a sign is made general. And as the former owes its generality, not to its being the sign of an abstract or general line, but of all particular right lines that may possibly exist; so the latter must be thought to derive its generality from the same cause, namely, the various particular lines which it indifferently denotes.

XIII. To give the reader a yet clearer view of the nature of abstract ideas, and the uses they are thought necessary to, I shall add one more passage out of the *Essay on Human Understanding*, which is as follows. "*Abstract ideas* are not so obvious or easy to children, or the yet unexercised mind, as particular ones. If they seem so to grown men, it is only because by constant and familiar use they are made so. For when we nicely reflect upon them, we shall find that general ideas are fictions and contrivances of the mind, that carry difficulty with them, and do not so easily offer themselves as we are apt to imagine. For example, does it not

require some pains and skill to form the general idea of a triangle? (which is yet none of the most abstract comprehensive and difficult); for it must be neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but *all and none* of these at once. In effect, it is something imperfect that cannot exist, an idea wherein some parts of several different and *inconsistent* ideas are put together. It is true, the mind in this imperfect state has need of such ideas, and makes all the haste to them it can, for the conveniency of communication and enlargement of knowledge, to both which it is naturally very much inclined. But yet one has reason to suspect such ideas are marks of our imperfection. At least this is enough to shew, that the most abstract and general ideas are not those that the mind is first and most easily acquainted with, nor such as its earliest knowledge is conversant about." B. iv. c. vii. sect. ix. If any man has the faculty of framing in his mind such an idea of a triangle as is here described, it is in vain to pretend to dispute him out of it, nor would I go about it. All I desire is, that the reader would fully and certainly inform himself, whether he has such an idea or not. And this, methinks, can be no hard task for any one to perform. What more easy than for any one to look a little into his own thoughts, and there try whether he has, or can attain to have, an idea that shall correspond with the description that is here given of the general idea of a triangle, which is, *neither oblique, nor rectangle, equilateral, equicrural, nor scalenon, but all and none of these at once?*

XIV. Much is here said of the difficulty that abstract ideas carry with them, and the pains and skill requisite to the forming them. And it is on all hands agreed that there is need of great toil and labour of the mind, to emancipate our thoughts from particular objects, and raise them to those sublime speculations that are conversant about abstract ideas. From all which the na-

tural consequence should seem to be, that so difficult a thing as the forming abstract ideas was not necessary for *communication*, which is so easy and familiar to all sorts of men. But we are told, if they seem obvious and easy to grown men, *it is only because by constant and familiar use they are made so.* Now I would fain know at what time it is, men are employed in surmounting that difficulty, and furnishing themselves with those necessary helps for discourse. It cannot be when they are grown up, for then it seems they are not conscious of any such pains-taking; it remains therefore to be the business of their childhood. And surely the great and multiplied labour of framing abstract notions will be found a hard task for that tender age. Is it not a hard thing to imagine, that a couple of children cannot prate together of their sugar-plums and rattles, and the rest of their little trinkets, till they have first tacked together numberless inconsistencies, and so framed in their minds *abstract general ideas*, and annexed them to every common name they make use of?

XV. Nor do I think them a whit more needful for the *enlargement of knowledge* than for *communication.* It is I know a point much insisted on, that all knowledge and demonstration are about universal notions, to which I fully agree: but then it doth not appear to me that those notions are formed by *abstraction* in the manner premised; *universality*, so far as I can comprehend, not consisting in the absolute, positive nature or conception of any thing, but in the relation it bears to the particulars signified or represented by it: by virtue whereof it is that things, names, or notions, being in their own nature *particular*, are rendered *universal.* Thus when I demonstrate any proposition concerning triangles, it is to be supposed that I have in view the universal idea of a triangle; which ought not to be understood as if I could frame an idea of a triangle which was neither equilateral, nor scalenon, nor equicrural: but

only that the particular triangle I consider, whether of this or that sort it matters not, doth equally stand for and represent all rectilinear triangles whatsoever, and is in that sense *universal*. All which seems very plain, and not to include any difficulty in it.

XVI. But here it will be demanded, how we can know any proposition to be true of all particular triangles, except we have first seen it demonstrated of the abstract idea of a triangle which equally agrees to all? For because a property may be demonstrated to agree to some one particular triangle, it will not thence follow that it equally belongs to any other triangle, which in all respects is not the same with it. For example, having demonstrated that the three angles of an isosceles rectangular triangle are equal to two right ones, I cannot therefore conclude this affection agrees to all other triangles, which have neither a right angle, nor two equal sides. It seems therefore, that, to be certain this proposition is universally true, we must either make a particular demonstration for every particular triangle, which is impossible, or once for all demonstrate it of the *abstract idea of a triangle*, in which all the particulars do indifferently partake, and by which they are all equally represented. To which I answer, that though the idea I have in view whilst I make the demonstration be, for instance, that of an isosceles rectangular triangle, whose sides are of a determinate length, I may nevertheless be certain it extends to all other rectilinear triangles, of what sort or bigness soever. And, that, because neither the right angle, nor the equality, nor determinate length of the sides, is at all concerned in the demonstration. It is true, the diagram I have in view includes all these particulars, but then there is not the least mention made of them in the proof of the proposition. It is not said, the three angles are equal to two right ones, because one of them is a right angle, or because the sides comprehending it are of the same

length: which sufficiently shews that the right angle might have been oblique, and the sides unequal, and for all that the demonstration have held good. And for this reason it is, that I conclude that to be true of any obliquangular or scalenon, which I had demonstrated of a particular right-angled equicrural triangle; and not because I demonstrated the proposition of the abstract idea of a triangle. And here it must be acknowledged that a man may consider a figure merely as triangular, without attending to the particular qualities of the angles, or relations of the sides. So far he may abstract: but this will never prove, that he can frame an abstract general inconsistent idea of a triangle. In like manner we may consider Peter so far forth as man, or so far forth as animal, without framing the forementioned abstract idea, either of man or of animal, inasmuch as all that is perceived is not considered.

XVII. It were an endless, as well as a useless thing, to trace the *schoolmen*, those great masters of abstraction, through all the manifold inextricable labyrinths of error and dispute, which their doctrine of abstract natures and notions seems to have led them into. What bickerings and controversies, and what a learned dust, have been raised about those matters, and what mighty advantage hath been from thence derived to mankind, are things at this day too clearly known to need being insisted on. And it had been well if the ill effects of that doctrine were confined to those only who make the most avowed profession of it. When men consider the great pains, industry, and parts, that have for so many ages been laid out on the cultivation and advancement of the sciences, and that notwithstanding all this, the far greater part of them remain full of darkness and uncertainty, and disputes that are like never to have an end; and even those that are thought to be supported by the most clear and cogent demonstrations, contain in them paradoxes which are perfectly irreconcilable to the un-

derstandings of men; and that taking all together, a small portion of them doth supply any real benefit to mankind, otherwise than by being an innocent diversion and amusement: I say, the consideration of all this is apt to throw them into a despondency, and perfect contempt of all study. But this may perhaps cease, upon a view of the false principles that have obtained in the world, amongst all which there is none, methinks, hath a more wide influence over the thoughts of speculative men, than this of abstract general ideas.

XVIII. I come now to consider the source of this prevailing notion, and that seems to me to be language. And surely nothing of less extent than reason itself could have been the source of an opinion so universally received. The truth of this appears as from other reasons, so also from the plain confession of the ablest patrons of abstract ideas, who acknowledge that they are made in order to naming; from which it is a clear consequence, that if there had been no such thing as speech or universal signs, there never had been any thought of abstraction. See b. iii. c. vi. sect. xxxix. and elsewhere of the *Essay on Human Understanding*. Let us therefore examine the manner wherein words have contributed to the origin of that mistake. First then, it is thought that every name hath, or ought to have, one only precise and settled signification, which inclines men to think there are certain *abstract, determinate ideas*, which constitute the true and only immediate signification of each general name. And that it is by the mediation of these abstract ideas, that a general name comes to signify any particular thing. Whereas, in truth, there is no such thing as one precise and definite signification annexed to any general name, they all signifying indifferently a great number of particular ideas. All which doth evidently follow from what has been already said, and will clearly appear to any one by a little reflection. To this it will be objected, that every name that has a de-

finition, is thereby restrained to one certain signification. For example, a triangle is defined to be a *plain surface comprehended by three right lines;* by which that name is limited to denote one certain idea and no other. To which I answer, that in the definition it is not said whether the surface be great or small, black or white, nor whether the sides are long or short, equal or unequal, nor with what angles they are inclined to each other; in all which there may be great variety, and consequently there is no one settled idea: which limits the signification of the word *triangle*. It is one thing for to keep a name constantly to the same definition, and another to make it stand every where for the same idea: the one is necessary, the other useless and impracticable.

XIX. But to give a farther account how words came to produce the doctrine of abstract ideas, it must be observed that it is a received opinion, that language has no other end but the communicating our ideas, and that every significant name stands for an idea. This being so, and it being withal certain, that names, which yet are not thought altogether insignificant, do not always mark out particular conceivable ideas, it is straightway concluded that they stand for abstract notion. That there are many names in use amongst speculative men, which do not always suggest to others determinate particular ideas, is what nobody will deny. And a little attention will discover, that it is not necessary (even in the strictest reasonings) significant names which stand for ideas should, every time they are used, excite in the understanding the ideas they are made to stand for: in reading and discoursing, names being for the most part used as letters are in algebra, in which though a particular quantity be marked by each letter, yet to proceed right it is not requisite that in every step each letter suggest to your thoughts that particular quantity it was appointed to stand for.

XX. Besides, the communicating of ideas marked by words is not the chief and only end of language, as is commonly supposed. There are other ends, as the raising of some passion, the exciting to or deterring from an action, the putting the mind in some particular disposition; to which the former is in many cases barely subservient, and sometimes entirely omitted, when these can be obtained without it, as I think doth not unfrequently happen in the familiar use of language. I entreat the reader to reflect with himself, and see if it doth not often happen, either in hearing or reading a discourse, that the passions of fear, love, hatred, admiration, disdain, and the like, arise immediately in his mind upon the perception of certain words, without any ideas coming between. At first, indeed, the words might have occasioned ideas that were fit to produce those emotions; but, if I mistake not, it will be found that when language is once grown familiar, the hearing of the sounds or sight of the characters is oft immediately attended with those passions, which at first were wont to be produced by the intervention of ideas that are now quite omitted. May we not, for example, be affected with the promise of a *good thing*, though we have not an idea of what it is? Or is not the being threatened with danger sufficient to excite a dread, though we think not of any particular evil likely to befall us, nor yet frame to ourselves an abstract? If any one shall join ever so little reflection of his own to what has been said, I believe it will evidently appear to him, that general names are often used in the propriety of language without the speaker's designing them for marks of ideas in his own, which he would have them raise in the mind of the hearer. Even proper names themselves do not seem always spoken with a design to bring into our view the ideas of those individuals that are supposed to be marked by them. For example, when a schoolman tells me *Aristotle hath said it*, all I conceive

he means by it, is, to dispose me to embrace his opinion with the deference and submission which custom has annexed to that name. And this effect may be so instantly produced in the minds of those who are accustomed to resign their judgment to the authority of that philosopher, as it is impossible any idea either of his person, writings, or reputation, should go before. Innumerable examples of this kind may be given; but why should I insist on those things which every one's experience will, I doubt not, plentifully suggest unto him?

XXI. We have, I think, shewn the impossibility of *abstract ideas*. We have considered what has been said for them by their ablest patrons; and endeavoured to shew they are of no use for those ends to which they are thought necessary. And, lastly, we have traced them to the source from whence they flow, which appears to be language. It cannot be denied that words are of excellent use, in that by their means all that stock of knowledge which has been purchased by the joint labours of inquisitive men in all ages and nations, may be drawn into the view and made the possession of one single person. But at the same time it must be owned that most parts of knowledge have been strangely perplexed and darkened by the abuse of words, and general ways of speech wherein they are delivered. Since therefore words are so apt to impose on the understanding, whatever ideas I consider, I shall endeavour to take them bare and naked into my view, keeping out of my thoughts, so far as I am able, those names which long and constant use hath so strictly united with them; from which I may expect to derive the following advantages.

XXII. First, I shall be sure to get clear of all controversies purely verbal; the springing up of which weeds in almost all the sciences has been a main hinderance

to the growth of true and sound knowledge. Secondly, this seems to be a sure way to extricate myself out of that fine and subtile net of *abstract ideas*, which has so miserably perplexed and entangled the minds of men, and that with this peculiar circumstance, that by how much the finer and more curious was the wit of any man, by so much the deeper was he like to be ensnared, and faster held therein. Thirdly, so long as I confine my thoughts to my own ideas divested of words, I do not see how I can easily be mistaken. The objects I consider, I clearly and adequately know. I cannot be deceived in thinking I have an idea which I have not. It is not possible for me to imagine, that any of my own ideas are alike or unlike, that are not truly so. To discern the agreements or disagreements that are between my ideas, to see what ideas are included in any compound idea, and what not, there is nothing more requisite, than an attentive perception of what passes in my own understanding.

XXIII. But the attainment of all these advantages doth presuppose an entire deliverance from the deception of words, which I dare hardly promise myself; so difficult a thing it is to dissolve a union so early begun, and confirmed by so long a habit as that betwixt words and ideas. Which difficulty seems to have been very much increased by the doctrine of *abstraction*. For so long as men thought abstract ideas were annexed to their words, it doth not seem strange that they should use words for ideas: it being found an impracticable thing to lay aside the word, and retain the abstract idea in the mind, which in itself was perfectly inconceivable. This seems to me the principal cause, why those men who have so emphatically recommended to others the laying aside all use of words in their meditations, and contemplating their bare ideas, have yet failed to perform it themselves. Of late many have been very sensible of the absurd opinions and insignificant disputes, which

grow out of the abuse of words. And in order to remedy these evils they advise well, that we attend to the ideas signified, and draw off our attention from the words which signify them. But how good soever this advice may be they have given others, it is plain they could not have a due regard to it themselves, so long as they thought the only immediate use of words was to signify ideas, and that the immediate signification of every general name was a *determinate, abstract idea*.

XXIV. But these being known to be mistakes, a man may with greater ease prevent his being imposed on by words. He that knows he has no other than particular ideas, will not puzzle himself in vain to find out and conceive the abstract idea annexed to any name. And he that knows names do not always stand for ideas, will spare himself the labour of looking for ideas where there are none to be had. It were therefore to be wished, that every one would use his utmost endeavours to obtain a clear view of the ideas he would consider, separating from them all that dress and incumbrance of words which so much contribute to blind the judgment and divide the attention. In vain do we extend our view into the heavens, and pry into the entrails of the earth; in vain do we consult the writings of learned men, and trace the dark footsteps of antiquity; we need only draw the curtain of words to behold the fairest tree of knowledge, whose fruit is excellent, and within the reach of our hand.

XXV. Unless we take care to clear the first principles of knowledge from the embarrass and delusion of words, we may make infinite reasonings upon them to no purpose; we may draw consequences from consequences, and be never the wiser. The farther we go, we shall only lose ourselves the more irrecoverably, and be the deeper entangled in difficulties and mistakes. Whoever therefore designs to read the following sheets,

I entreat him to make my words the occasion of his own thinking, and endeavour to attain the same train of thoughts in reading, that I had in writing them. By this means it will be easy for him to discover the truth or falsity of what I say. He will be out of all danger of being deceived by my words, and I do not see how he can be led into an error by considering his own naked, undisguised ideas.

OF THE

PRINCIPLES

OF

HUMAN KNOWLEDGE.

I. It is evident to any one who takes a survey of the objects of human knowledge, that they are either ideas actually imprinted on the senses, or else such as are perceived by attending to the passions and operations of the mind, or lastly, ideas formed by help of memory and imagination, either compounding, dividing, or barely representing, those originally perceived in the aforesaid ways. By sight I have the ideas of light and colours with their several degrees and variations. By touch I perceive, for example, hard and soft, heat and cold, motion and resistance, and of all these more and less either as to quantity or degree. Smelling furnishes me with odours, the palate with tastes, and hearing conveys sounds to the mind in all their variety of tone and composition. And as several of these are observed to accompany each other, they come to be marked by one name, and so to be reputed as one thing. Thus, for example, a certain colour, taste, smell, figure, and consistence, having been observed to go together, are accounted one distinct thing, signified by the name *apple*. Other collections of ideas constitute a stone, a tree, a book, and the like sensible things; which, as they are pleasing or disagreeable, excite the passions of love, hatred, joy, grief, and so forth.

II. But besides all that endless variety of ideas or objects of knowledge, there is likewise something which knows or perceives them, and exercises divers operations; as willing, imagining, remembering about them. This perceiving active being is what I call *mind*, *spirit*, *soul*, or *myself*. By which words I do not denote any one of my ideas, but a thing entirely distinct from them, wherein they exist, or, which is the same thing, whereby they are perceived; for the existence of an idea consists in being perceived.

III. That neither our thoughts, nor passions, nor ideas formed by the imagination, exist without the mind, is what every body will allow. And it seems no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (that is, whatever objects they compose), cannot exist otherwise than in a mind perceiving them. I think an intuitive knowledge may be obtained of this, by any one that shall attend to what is meant by the term *exist*, when applied to sensible things. The table I write on, I say, exists, that is, I see and feel it; and if I were out of my study I should say it existed, meaning thereby that if I was in my study I might perceive it, or that some other spirit actually does perceive it. There was an odour, that is, it was smelled; there was a sound, that is to say, it was heard; a colour or figure, and it was perceived by sight or touch. This is all that I can understand by these and the like expressions. For as to what is said of the absolute existence of unthinking things without any relation to their being perceived, that seems perfectly unintelligible. Their *esse* is *percipi*, nor is it possible they should have any existence out of the minds or thinking things which perceive them.

IV. It is indeed an opinion strangely prevailing amongst men, that houses, mountains, rivers, and in a word all sensible objects, have an existence natural or real distinct from their being perceived by the under-

standing. But with how great an assurance and acquiescence soever this principle may be entertained in the world; yet whoever shall find in his heart to call it in question, may, if I mistake not, perceive it to involve a manifest contradiction. For what are the forementioned objects but the things we perceive by sense, and what do we perceive besides our own ideas or sensations; and is it not plainly repugnant that any one of these or any combination of them should exist unperceived?

V. If we thoroughly examine this tenet, it will, perhaps, be found at bottom to depend on the doctrine of *abstract ideas*. For can there be a nicer strain of abstraction, than to distinguish the existence of sensible objects from their being perceived, so as to conceive them existing unperceived? Light and colours, heat and cold, extension and figures, in a word the things we see and feel, what are they but so many sensations, notions, ideas or impressions on the sense; and is it possible to separate, even in thought, any of these from perception? For my part I might as easily divide a thing from itself. I may indeed divide in my thoughts or conceive apart from each other those things which, perhaps, I never perceived by sense so divided. Thus I imagine the trunk of a human body without the limbs, or conceive the smell of a rose without thinking on the rose itself. So far I will not deny I can abstract, if that may properly be called *abstraction* which extends only to the conceiving separately such objects as it is possible may really exist or be actually perceived asunder. But my conceiving or imagining power does not extend beyond the possibility of real existence or perception. Hence as it is impossible for me to see or feel any thing without an actual sensation of that thing, so is it impossible for me to conceive in my thoughts any sensible thing or object distinct from the sensation or perception of it.

VI. Some truths there are so near and obvious to the mind, that a man need only open his eyes to see them. Such I take this important one to be, to wit, that all the choir of heaven and furniture of the earth, in a word all those bodies which compose the mighty frame of the world, have not any subsistence without a mind, that their being is to be perceived or known; that consequently so long as they are not actually perceived by me, or do not exist in my mind or that of any other created spirit, they must either have no existence at all, or else subsist in the mind of some eternal spirit: it being perfectly unintelligible, and involving all the absurdity of abstraction, to attribute to any single part of them an existence independent of a spirit. To be convinced of which, the reader need only reflect and try to separate in his own thoughts the being of a sensible thing from its being perceived.

VII. From what has been said, it follows, there is not any other substance than *spirit*, or that which perceives. But for the fuller proof of this point, let it be considered, the sensible qualities are colour, figure, motion, smell, taste, and such like, that is, the ideas perceived by sense. Now for an idea to exist in an unperceiving thing, is a manifest contradiction; for to have an idea is all one as to perceive: that therefore wherein colour, figure, and the like qualities exist, must perceive them; hence it is clear there can be no unthinking substance or *substratum* of those ideas.

VIII. But say you, though the ideas themselves do not exist without the mind, yet there may be things like them whereof they are copies or resemblances, which things exist without the mind, in an unthinking substance. I answer, an idea can be like nothing but an idea; a colour or figure can be like nothing but another colour or figure. If we look but ever so little into our thoughts, we shall find it impossible for us to conceive a likeness except only between our ideas. Again, I ask

whether those supposed originals or external things, of which our ideas are the pictures or representations, be themselves perceivable or not? if they are, then they are ideas, and we have gained our point; but if you say they are not, I appeal to any one whether it be sense, to assert a colour is like something which is invisible; hard or soft, like something which is intangible; and so of the rest.

IX. Some there are who make a distinction betwixt *primary* and *secondary* qualities: by the former, they mean extension, figure, motion, rest, solidity or impenetrability, and number: by the latter they denote all other sensible qualities, as colours, sounds, tastes, and so forth. The ideas we have of these they acknowledge not to be the resemblances of any thing existing without the mind or unperceived; but they will have our ideas of the primary qualities to be patterns or images of things which exist without the mind, in an unthinking substance which they call *matter*. By matter therefore we are to understand an inert, senseless substance, in which extension, figure, and motion, do actually subsist. But it is evident from what we have already shewn, that extension, figure and motion are only ideas existing in the mind, and that an idea can be like nothing but another idea, and that consequently neither they nor their archetypes can exist in an unperceiving substance. Hence it is plain, that the very notion of what is called *matter* or *corporeal substance*, involves a contradiction in it.

X. They who assert that figure, motion, and the rest of the primary or original qualities, do exist without the mind, in unthinking substances, do at the same time acknowledge that colours, sounds, heat, cold, and suchlike secondary qualities, do not, which they tell us are sensations existing in the mind alone, that depend on and are occasioned by the different size, texture, and motion, of the minute particles of matter. This they take for an undoubted truth, which they can demonstrate

beyond all exception. Now if it be certain, that those original qualities are inseparably united with the other sensible qualities, and not, even in thought, capable of being abstracted from them, it plainly follows, that they exist only in the mind. But I desire any one to reflect and try, whether he can, by any abstraction of thought, conceive the extension and motion of a body, without all other sensibles qualities. For my own part, I see evidently that it is not in my power to frame an idea of a body extended and moved, but I must withal give it some colour or other sensible quality which is acknowledged to exist only in the mind. In short, extension, figure, and motion, abstracted from all other qualities, are inconceivable. Where therefore the other sensible qualities are, there must these be also, to wit, in the mind, and no where else.

XI. Again, *great* and *small*, *swift* and *slow*, are allowed to exist no where without the mind, being entirely relative, and changing as the frame or position of the organs of sense varies. The extension therefore which exists without the mind, is neither great nor small, the motion neither swift nor slow, that is, they are nothing at all. But, say you, they are extension in general, and motion in general: thus we see how much the tenet of extended, moveable substances existing without the mind, depends on that strange doctrine of *abstract ideas*. And here I cannot but remark, how nearly the vague and indeterminate description of matter or corporeal substance, which the modern philosophers are run into by their own principles, resembles that antiquated and so-much-ridiculed notion of *materia prima*, to be met with in Aristotle and his followers. Without extension solidity cannot be conceived. Since therefore it has been shewn that extension exists not in an unthinking substance, the same must also be true of solidity.

XII. That number is entirely the creature of the mind, even though the other qualities be allowed to

exist without, will be evident to whoever considers, that the same thing bears a different denomination of number, as the mind views it with different respects. Thus, the same extension is one or three or thirty-six, according as the mind considers it with reference to a yard, a foot, or an inch. Number is so visibly relative, and dependent on men's understanding, that it is strange to think how any one should give it an absolute existence without the mind. We say one book, one page, one line; all these are equally units, though some contain several of the others. And in each instance it is plain, the unit relates to some particular combination of ideas arbitrarily put together by the mind.

XIII. Unity I know some will have to be a simple or uncompounded idea, accompanying all other ideas into the mind. That I have any such idea answering the word *unity*, I do not find; and if I had, methinks I could not miss finding it; on the contrary it should be the most familiar to my understanding, since it is said to accompany all other ideas, and to be perceived by all the ways of sensation and reflection. To say no more, it is an *abstract idea*.

XIV. I shall farther add, that after the same manner as modern philosophers prove certain sensible qualities to have no existence in matter, or without the mind, the same thing may be likewise proved of all other sensible qualities whatsoever. Thus, for instance, it is said that heat and cold are affections only of the mind, and not at all patterns of real beings existing in the corporeal substances which excite them, for that the same body which appears cold to one hand seems warm to another. Now why may we not as well argue that figure and extension are not patterns or resemblances of qualities existing in matter, because to the same eye at different stations, or eyes of a different texture at the same station, they appear various, and cannot therefore be the images of any thing settled and determinate without the

mind? Again, it is proved that sweetness is not really in the sapid thing, because the thing remaining unaltered the sweetness is changed into bitter, as in case of a fever or otherwise vitiated palate. Is it not as reasonable to say, that motion is not without the mind, since if the succession of ideas in the mind becomes swifter, the motion, it is acknowledged, shall appear slower, without any alteration in any external object.

XV. In short, let any one consider those arguments, which are thought manifestly to prove that colours and tastes exist only in the mind, and he shall find they may with equal force, be brought to prove the same thing of extension, figure, and motion. Though it must be confessed this method of arguing doth not so much prove that there is no extension or colour in an outward object, as that we do not know by sense which is the true extension or colour of the object. But the arguments foregoing plainly shew it to be impossible that any colour or extension at all, or other sensible quality whatsoever, should exist in an unthinking subject without the mind, or in the truth, that there should be any such thing as an outward object.

XVI. But let us examine a little the received opinion. It is said, extension is a mode or accident of matter, and that matter is the *substratum* that supports it. Now I desire that you would explain what is meant by matter's *supporting* extension: say you, I have no idea of matter, and therefore cannot explain it. I answer, though you have no positive, yet if you have any meaning at all, you must at least have a relative idea of matter: though you know not what it is, yet you must be supposed to know what relation it bears to accidents, and what is meant by its supporting them. It is evident *support* cannot here be taken in its usual or literal sense, as when we say that pillars support a building: in what sense therefore must it be taken?

XVII. If we inquire into what the most accurate

philosophers declare themselves to mean by *material substance*, we shall find them acknowledge, they have no other meaning annexed to those sounds, but the idea of being in general, together with the relative notion of its supporting accidents. The general idea of being appeareth me to the most abstract and incomprehensible of all other; and as for its supporting accidents, this, as we have just now observed, cannot be understood in the common sense of those words; it must therefore be taken in some other sense, but what that is they do not explain. So that when I consider the two parts or branches which make the signification of the words *material substance*, I am convinced there is no distinct meaning annexed to them. But why should we trouble ourselves any farther, in discussing this material *substratum* or support of figure and motion, and other sensible qualities? Does it not suppose they have an existence without the mind? And is not this a direct repugnancy and altogether inconceivable?

XVIII. But though it were possible that solid, figured, moveable substances may exist without the mind, corresponding to the ideas we have of bodies, yet how is it possible for us to know this? Either we must know it by sense, or by reason. As for our senses, by them we have the knowledge only of our sensations, ideas, or those things that are immediately perceived by sense, call them what you will: but they do not inform us that things exist without the mind, or unperceived, like to those which are perceived. This the materialists themselves acknowledge. It remains therefore that if we have any knowledge at all of external things, it must be by reason, inferring their existence from what is immediately perceived by sense. But what reason can induce us to believe the existence of bodies without the mind from what we perceive, since the very patrons of matter themselves do not pretend there is any necessary connexion betwixt them and our ideas? I say it is granted

on all hands (and what happens in dreams, frenzies, and the like, puts it beyond dispute), that it is possible we might be affected with all the ideas we have now, though no bodies existed without resembling them. Hence it is evident the supposition of external bodies is not necessary for the producing our ideas: since it is granted they are produced sometimes, and might possibly be produced always, in the same order we see them in at present, without their concurrence.

XIX. But though we might possibly have all our sensations without them, yet perhaps it may be thought easier to conceive and explain the manner of their production, by supposing external bodies in their likeness rather than otherwise; and so it might be at least probable there are such things as bodies that excite their ideas in our minds. But neither can this be said; for though we give the materialists their external bodies, they by their own confession are never the nearer knowing how our ideas are produced: since they own themselves unable to comprehend in what manner body can act upon spirit, or how it is possible it should imprint any idea in the mind. Hence it is evident the production of ideas or sensations in our minds can be no reason why we should suppose matter or corporeal substances, since that is ackowledged to remain equally inexplicable with or without this supposition. If therefore it were possible for bodies to exist without the mind, yet to hold they do so, must needs be a very precarious opinion; since it is to suppose, without any reason at all, that God has created innumerable beings that are entirely useless, and serve to no manner of purpose.

XX. In short, if there were external bodies, it is impossible we should ever come to know it; and if there were not, we might have the very same reasons to think there were that we have now. Suppose, what no one can deny possible, an intelligence, without the help of external bodies, to be affected with the same train of sen-

sations or ideas that you are, imprinted in the same order, and with like vividness in his mind. I ask whether that intelligence hath not all the reason to believe the existence of coporeal substances, represented by his ideas, and exciting them in his mind, that you can possibly have for believing the same thing? Of this there can be no question; which one consideration is enough to make any reasonable person suspect the strength of whatever arguments he may think himself to have, for the existence of bodies without the mind.

XXI. Were it necessary to add any farther proof against the existence of matter, after what has been said, I could instance several of those errors and difficulties (not to mention impieties) which have sprung from that tenet. It has occasioned numberless controversies and disputes in philosophy, and not a few of far greater moment in religion. But I shall not enter into the detail of them in this place, as well because I think, arguments *à posteriori* are unnecessary for confirming what has been, if I mistake not, sufficiently demonstrated *à priori*, as because I shall hereafter find occasion to say somewhat of them.

XXII. I am afraid I have given cause to think me needlessly prolix in handling this subject. For to what purpose is it to dilate on that which may be demonstrated with the utmost evidence in a line or two, to any one that is capable of the least reflection? It is but looking into your own thoughts, and so trying whether you can conceive it possible for a sound, or figure, or motion, or colour, to exist without the mind, or unperceived. This easy trial may make you see, that what you contend for, is a downright contradiction. Insomuch that I am content to put the whole upon this issue; if you can but conceive it possible for one extended moveable substance, or in general, for any one idea or any thing like an idea, to exist otherwise than in a mind perceiving it, I shall readily give up the cause: and as for all that *compages* of

external bodies which you contend for, I shall grant you its existence, though you cannot either give me any reason why you believe it exists, or assign any use to it when it is supposed to exist. I say, the bare possibility of your opinion's being true, shall pass for an argument that it is so.

XXIII. But say you, surely there is nothing easier than to imagine trees, for instance, in a park, or books existing in a closet, and nobody by to perceive them. I answer, you may so, there is no difficulty in it: but what is all this, I beseech you, more than framing in your mind certain ideas which you call *books* and *trees*, and at the same time omitting to frame the idea of any one that may perceive them? but do not you yourself perceive or think of them all the while? this therefore is nothing to the purpose: it only shews you have the power of imagining or forming ideas in your mind; but it doth not shew that you can conceive it possible the objects of your thought may exist without the mind: to make out this, it is necessary that you conceive them existing unconceived or unthought of, which is a manifest repugnancy. When we do our utmost to conceive the existence of external bodies, we are all the while only contemplating our own ideas. But the mind taking no notice of itself, is deluded to think it can and doth conceive bodies existing unthought of or without the mind; though at the same time they are apprehended by or exist in itself. A little attention will discover to any one the truth and evidence of what is here said, and make it unnecessary to insist on any other proofs against the existence of material substance.

XXIV. It is very obvious, upon the least inquiry into our own thoughts, to know whether it be possible for us to understand what is meant, by the *absolute existence of sensible objects in themselves, or without the mind.* To me it is evident those words mark out either a direct contradiction, or else nothing at all. And to convince others of this, I know no readier or fairer way,

than to entreat they would calmly attend to their own thoughts: and if by this attention, the emptiness or repugnancy of those expressions does appear, surely nothing more is requisite for their conviction. It is on this therefore that I insist, to wit, that the absolute existence of unthinking things are words without a meaning, or which include a contradiction. This is what I repeat and inculcate, and earnestly recommend to the attentive thoughts of the reader.

XXV. All our ideas, sensations, or the things which we perceive, by whatsoever names they may be distinguished, are visibly inactive; there is nothing of power or agency included in them. So that one idea or object of thought cannot produce, or make any alteration in another. To be satisfied of the truth of this, there is nothing else requisite but a bare observation of our ideas. For since they and every part of them exist only in the mind, it follows that there is nothing in them but what is perceived. But whoever shall attend to his ideas, whether of sense or reflection, will not perceive in them any power or activity; there is therefore no such thing contained in them. A little attention will discover to us that the very being of an idea implies passiveness and inertness in it, insomuch that it is impossible for an idea to do any thing, or, strictly speaking, to be the cause of any thing: neither can it be the resemblance or pattern of any active being, as is evident from sect. viii. Whence it plainly follows that extension, figure and motion, cannot be the cause of our sensations. To say therefore, that these are the effects of powers resulting from the configuration, number, motion, and size of corpuscles, must certainly be false.

XXVI. We perceive a continual succession of ideas, some are anew excited, others are changed or totally disappear. There is therefore some cause of these ideas whereon they depend, and which produces and changes them. That this cause cannot be any quality or idea,

or combination of ideas, is clear from the preceding section. It must therefore be a substance; but it has been shewn that there is no corporeal or material substance: it remains therefore that the cause of ideas is an incorporeal active substance or spirit.

XXVII. A spirit is one simple, undivided, active being: as it perceives ideas, it is called the *understanding*, and as it produces or otherwise operates about them, it is called the *will*. Hence there can be no idea formed of a soul or spirit: for all ideas whatever, being passive and inert, *vide* sect. xxv. they cannot represent unto us, by way of image or likeness, that which acts. A little attention will make it plain to any one, that to have an idea which shall be like that active principle of motion and change of ideas, is absolutely impossible. Such is the nature of *spirit* or that which acts, that it cannot be of itself perceived, but only by the effects which it produceth. If any man shall doubt of the truth of what is here delivered, let him but reflect and try if he can frame the idea of any power or active being; and whether he hath ideas of two principal powers, marked by the names *will* and *understanding*, distinct from each other, as well as from a third idea of substance or being in general, with a relative notion of its supporting or being the subject of the aforesaid powers, which is signified by the name *soul* or *spirit*. This is what some hold; but so far as I can see, the words *will, soul, spirit*, do not stand for different ideas, or in truth, for any idea at all, but for something which is very different from ideas, and which being an agent cannot be like unto, or represented by, any idea whatsoever. Though it must be owned at the same time, that we have some notion of soul, spirit, and the operations of the mind, such as willing, loving, hating, inasmuch as we know or understand the meaning of those words.

XXVIII. I find I can excite ideas in my mind at pleasure, and vary and shift the scene as oft as I think

fit. It is no more than willing, and straightway this or that idea arises in my fancy: and by the same power it is obliterated, and makes way for another. This making and unmaking of ideas doth very properly denominate the mind active. Thus much is certain, and grounded on experience: but when we talk of unthinking agents, or of exciting ideas exclusive of volition, we only amuse ourselves with words.

XXIX. But whatever power I may have over my own thoughts, I find the ideas actually perceived by sense have not a like dependance on my will. When in broad day-light I open my eyes, it is not in my power to choose whether I shall see or no, or to determine what particular objects shall present themselves to my view: and so likewise as to the hearing and other senses, the ideas imprinted on them are not creatures of my will. There is therefore some other will or spirit that produces them.

XXX. The ideas of sense are more strong, lively, and distinct than those of the imagination; they have likewise a steadiness, order and coherence, and are not excited at random, as those which are the effects of human wills often are, but in a regular train or series, the admirable connexion whereof sufficiently testifies the wisdom and benevolence of its Author. Now the set rules or established methods, wherein the mind we depend on excites in us the ideas of sense, are called the *laws of nature*: and these we learn by experience, which teaches us that such and such ideas are attended with such and such other ideas, in the ordinary course of things.

XXXI. This gives us a sort of foresight, which enables us to regulate our actions for the benefit of life. And without this we should be eternally at a loss: we could not know how to act any thing that might procure us the least pleasure, or remove the least pain of sense. That food nourishes, sleep refreshes, and fire warms us; that to sow in the seed-time is the way to

reap in the harvest, and, in general, that to obtain such or such ends, such or such means are conducive, all this we know, not by discovering any necessary connexion between our ideas, but only by the observation of the settled laws of nature, without which we should be all in uncertainty and confusion, and a grown man no more know how to manage himself in the affairs of life, than an infant just born.

XXXII. And yet this consistent uniform working, which so evidently displays the goodness and wisdom of that governing Spirit whose will constitutes the laws of nature, is so far from leading our thoughts to him, that it rather sends them a wandering after second causes. For when we perceive certain ideas of sense constantly followed by other ideas, and we know that is not of our own doing, we forthwith attribute power and agency to the ideas themselves, and make one the cause of another, than which nothing can be more absurd and unintelligible. Thus for example, having observed that when we perceive by sight a certain round luminous figure, we at the same time perceive by touch the idea or sensation called *heat*, we do from thence conclude the sun to be the cause of heat. And in like manner perceiving the motion and collision of bodies to be attended with sound, we are inclined to think the latter an effect of the former.

XXXIII. The ideas imprinted on the senses by the Author of nature are called *real things*: and those excited in the imagination being less regular, vivid and constant, are more properly termed *ideas* or *images of things*, which they copy and represent. But then our sensations, be they never so vivid and distinct, are nevertheless *ideas*, that is, they exist in the mind, or are perceived by it, as truly as the ideas of its own framing. The ideas of sense are allowed to have more reality in them, that is, to be more strong, orderly, and coherent than the creatures of the mind; but this is no argument

that they exist without the mind. They are also less dependent on the spirit, or thinking substance which perceives them, in that they are excited by the will of another and more powerful spirit: yet still they are *ideas*, and certainly no *idea*, whether faint or strong, can exist otherwise than in a mind perceiving it.

XXXIV. Before we proceed any farther, it is necessary to spend some time in answering objections which may probably be made against the principles hitherto laid down. In doing of which, if I seem too prolix to those of quick apprehensions, I hope it may be pardoned, since all men do not equally apprehend things of this nature; and I am willing to be understood by every one. First then it will be objected that by the foregoing principles, all that is real and substantial in nature is banished out of the world: and instead thereof a chimerical scheme of ideas takes place. All things that exist, exist only in the mind, that is, they are purely notional. What therefore becomes of the sun, moon, and stars? What must we think of houses, rivers, mountains, trees, stones; nay, even of our own bodies? Are all these but so many chimeras and illusions on the fancy? To all which, and whatever else of the same sort may be objected, I answer, that by the principles premised, we are not deprived of any one thing in nature. Whatever we see, feel, hear, or any wise conceive or understand, remains as secure as ever, and is as real as ever. There is a *rerum natura*, and the distinction between realities and chimeras retains its full force. This is evident from sect. xxix. xxx. xxxiii. where we have shewn what is meant by *real things* in opposition to *chimeras*, or ideas of our own framing; but then they both equally exist in the mind, and in that sense are like *ideas*.

XXXV. I do not argue against the existence of any one thing that we can apprehend, either by sense or reflection. That the things I see with mine eyes and touch with my hands do exist, really exist, I make not the

least question. The only thing whose existence we deny, is that which philosophers call matter or corporeal substance. And in doing of this, there is no damage done to the rest of mankind, who, I dare say, will never miss it. The atheist indeed will want the colour of an empty name to support his impiety; and the philosophers may possibly find, they have lost a great handle for trifling and disputation.

XXXVI. If any man thinks this detracts from the existence or reality of things, he is very far from understanding what hath been premised in the plainest terms I could think of. Take here an abstract of what has been said. There are spiritual substances, minds, or human souls, which will or excite ideas in themselves at pleasure: but these are faint, weak, and unsteady, in respect of others they perceive by sense, which being impressed upon them according to certain rules or laws of nature, speak themselves the effects of a mind more powerful and wise than human spirits. These latter are said to have more *reality* in them than the former: by which is meant that they are more affecting, orderly, and distinct, and that they are not fictions of the mind perceiving them. And in this sense, the sun that I see by day is the real sun, and that which I imagine by night is the idea of the former. In the sense here given of *reality*, it is evident that every vegetable, star, mineral, and in general each part of the mundane system, is as much a *real being* by our principles as by any other. Whether others mean any thing by the term *reality*, different from what I do, I entreat them to look into their own thoughts and see.

XXXVII. It will be urged that thus much at least is true, to wit, that we take away all corporeal substances. To this my answer is, That if the word *substance* be taken in the vulgar sense, for a combination of sensible qualities, such as extension, solidity, weight, and the like; this we cannot be accused of taking away.

But if it be taken in a philosophic sense, for the support of accidents or qualities without the mind: then indeed I acknowledge that we take it away, if one may be said to take away that which never had any existence, not even in the imagination.

XXXVIII. But, say you, it sounds very harsh to say we eat and drink ideas, and are clothed with ideas. I acknowledge it does so, the word *idea* not being used in common discourse to signify the several combinations of sensible qualities, which are called *things*: and it is certain that any expression which varies from the familiar use of language, will seem harsh and ridiculous. But this doth not concern the truth of the proposition, which in other words is no more than to say, we are fed and clothed with those things which we perceive immediately by our senses. The hardness or softness, the colour, taste, warmth, figure, and such like qualities, which combined together constitute the several sorts of victuals and apparel, have been shewn to exist only in the mind that perceives them; and this is all that is meant by calling them *ideas*; which word, if it was as ordinarily used as *thing*, would sound no harsher nor more ridiculous than it. I am not for disputing about the propriety, but the truth of the expression. If therefore you agree with me that we eat and drink, and are clad with the immediate objects of sense which cannot exist unperceived or without the mind; I shall readily grant it is more proper or conformable to custom, that they should be called things rather than ideas.

XXXIX. If it be demanded why I make use of the word *idea*, and do not rather in compliance with custom call them things; I answer, I do it for two reasons: First, because the term *thing*, in contradiction to *idea*, is generally supposed to denote somewhat existing without the mind: Secondly, because *thing* hath a more comprehensive signification than *idea*, including spirits or thinking things as well as ideas. Since therefore the

objects of sense exist only in the mind, and are withal thoughtless and inactive, I chose to mark them by the word *idea*, which implies those properties.

XL. But say what we can, some one perhaps may be apt to reply, he will still believe his senses, and never suffer any arguments, how plausible soever, to prevail over the certainty of them. Be it so, assert the evidence of sense as high as you please, we are willing to do the same. That what I see, hear, and feel, doth exist, that is to say, is perceived by me, I no more doubt than I do of my own being. But I do not see how the testimony of sense can be alleged, as a proof of the existence of any thing, which is not perceived by sense. We are not for having any man turn *sceptic*, and disbelieve his senses; on the contrary we give them all the stress and assurance imaginable; nor are there any principles more opposite to scepticism, than those we have laid down, as shall be hereafter clearly shewn.

XLI. Secondly, it will be objected, that there is a great difference betwixt real fire, for instance, and the idea of fire, betwixt dreaming or imagining oneself burnt, and actually being so: this and the like may be urged in opposition to our tenets. To all which the answer is evident from what hath been already said, and I shall only add in this place, that if real fire be very different from the idea of fire, so also is the real pain that it occasions, very different from the idea of the same pain: and yet nobody will pretend that real pain either is, or can possibly be, in an unperceiving thing or without the mind, any more than its idea.

XLII. Thirdly, It will be objected, that we see things actually without or at a distance from us, and which consequently do not exist in the mind, it being absurd that those things which are seen at the distance of several miles, should be as near to us as our own thoughts. In answer to this, I desire it may be considered, that in a dream we do oft perceive things as exist-

ing at a great distance off, and yet for all that, those things are acknowledged to have their existence only in the mind.

XLIII. But for the fuller clearing of this point, it may be worth while to consider, how it is that we perceive distance and things placed at a distance by sight. For that we should in truth see external space, and bodies actually existing in it, some nearer, others farther off, seems to carry with it some opposition to what hath been said, of their existing no where without the mind. The consideration of this difficulty it was, that gave birth to my *Essay towards a new Theory of Vision*, which was published not long since. Wherein it is shewn that *distance* or outness is neither immediately of itself perceived by sight, nor yet apprehended or judged of by lines and angles, or any thing that hath a necessary connexion with it: but that it is only suggested to our thoughts, by certain visible ideas and sensations attending vision, which in their own nature have no manner of similitude or relation, either with distance, or things placed at a distance. But by a connexion taught us by experience, they come to signify and suggest them to us, after the same manner that words of any language suggest the ideas they are made to stand for. Insomuch that a man born blind, and afterwards made to see, would not, at first sight, think the things he saw, to be without his mind, or at any distance from him. See sect. xli. of the forementioned treatise.

XLIV. The ideas of sight and touch make two species, entirely distinct and heterogeneous. The former are marks and prognostics of the latter. That the proper objects of sight neither exist without the mind, nor are the images of external things, was shewn even in that treatise. Though throughout the same, the contrary be supposed true of tangible objects: not that to suppose that vulgar error, was necessaay for establishing the notions therein laid down; but because it was be-

side my purpose to examine and refute it in a discourse concerning *vision*. So that in strict truth the ideas of sight, when we apprehend by them distance, and things placed at a distance, do not suggest or mark out to us things actually existing at a distance, but only admonish us what ideas of touch will be imprinted in our minds at such and such distances of time, and in consequence of such or such actions. It is, I say, evident from what has been said in the foregoing parts of this treatise, and in sect. cxlvii. and elsewhere of the Essay concerning Vision, that visible ideas are the language whereby the governing spirit, on whom we depend, informs us what tangible ideas he is about to imprint upon us, in case we excite this or that motion in our own bodies. But for a fuller information in this point, I refer to the Essay itself.

XLV. Fourthly, it will be objected, that from the foregoing principles it follows, things are every moment annihilated and created anew. The objects of sense exist only when they are perceived: the trees therefore are in the garden, or the chairs in the parlour, no longer than while there is somebody by to perceive them. Upon shutting my eyes all the furniture in the room is reduced to nothing, and barely upon opening them it is again created. In answer to all which, I refer the reader to what has been said in sect. iii. iv. &c. and desire he will consider whether he means any thing by the actual existence of an idea, distinct from its being perceived. For my part, after the nicest inquiry I could make, I am not able to discover that any thing else is meant by those words. And I once more entreat the reader to sound his own thoughts, and not suffer himself to be imposed on by words. If he can conceive it possible either for his ideas or their archetypes to exist without being perceived, then I give up the cause: but if he cannot, he will acknowledge it is unreasonable for him to stand up in defence of he knows not what,

and pretend to charge on me as an absurdity, the not assenting to those propositions which at bottom have no meaning in them.

XLVI. It will not be amiss to observe, how far the received principles of philosophy are themselves chargeable with those pretended absurdities. It is thought strangely absurd that upon closing my eyelids, all the visible objects round me should be reduced to nothing; and yet is not this what philosophers commonly acknowledge, when they agree on all hands, that light and colours, which alone are the proper and immediate objects of sight, are mere sensations that exist no longer than they are perceived? Again, it may to some perhaps seem very incredible, that things should be every moment creating, yet this very notion is commonly taught in the schools. For the *schoolmen*, though they acknowledge the existence of matter, and that the whole mundane fabric is framed out of it, are nevertheless of opinion that it cannot subsist without the Divine conservation, which by them is expounded to be a continual creation.

XLVII. Farther, a little thought will discover to us, that though we allow the existence of matter or corporeal substance, yet it will unavoidably follow from the principles which are now generally admitted, that the particular bodies, of what kind soever, do none of them exist whilst they are not perceived. For it is evident from sect. xi. and the following sections, that the matter philosophers contend for, is an incomprehensible somewhat which hath none of those particular qualities, whereby the bodies falling under our senses are distinguished one from another. But to make this more plain, it must be remarked, that the infinite divisibility of matter is now universally allowed, at least by the most approved and considerable philosophers, who on the received principles demonstrate it beyond all exception. Hence it follows, that there is an infinite num-

ber of parts in each particle of matter, which are not perceived by sense. The reason therefore, that any particular body seems to be of a finite magnitude, or exhibits only a finite number of parts to sense, is, not because it contains no more, since in itself it contains an infinite number of parts, but because the sense is not acute enough to discern them. In proportion therefore as the sense is rendered more acute, it perceives a greater number of parts in the object; that is, the object appears greater, and its figure varies, those parts in its extremities which were before unperceivable, appearing now to bound it in very different lines and angles from those perceived by an obtuser sense. And at length, after various changes of size and shape, when the sense becomes infinitely acute, the body shall seem infinite. During all which there is no alteration in the body, but only in the sense. Each body therefore considered in itself, is infinitely extended, and consequently void of all shape or figure. From which it follows, that though we should grant the existence of matter to be ever so certain, yet it is withal as certain the materialists themselves are by their own principles forced to acknowledge, that neither the particular bodies perceived by sense, nor any thing like them, exists without the mind. Matter, I say, and each particle thereof, is according to them infinite and shapeless, and it is the mind that frames all that variety of bodies which compose the visible world, any one whereof does not exist longer than it is perceived.

XLVIII. If we consider it, the objection proposed in sect. xlv. will not be found reasonably charged on the principles we have premised, so as in truth to make any objection at all against our notions. For though we hold indeed the objects of sense to be nothing else but ideas which cannot exist unperceived; yet we may not hence conclude they have no existence except only while they are perceived by us, since there may be some other spi-

rit that perceives them, though we do not. Wherever bodies are said to have no existence without the mind, I would not be understood to mean this or that particular mind, but all minds whatsoever. It does not therefore follow from the foregoing principles, that bodies are annihilated and created every moment, or exist not at all during the intervals between our perception in them.

XLIX. Fifthly, It may perhaps be objected, that if extension and figure exist only in the mind, it follows that the mind is extended and figured; since extension is a mode or attribute, which (to speak with the schools) is predicated of the subject in which it exists. I answer, Those qualities are in the mind only as they are perceived by it; that is, not by way of *mode* or *attribute*, but only by way of *idea*; and it no more follows, that the soul or mind is extended because extension exists in it alone, than it does that it is red or blue, because those colours are on all hands acknowledged to exist in it, and no where else. As to what philosophers say of subject and mode, that seems very groundless and unintelligible. For instance, in this proposition, a die is hard, extended and square; they will have it that the word *die* denotes a subject or substance, distinct from the hardness, extension, and figure, which are predicated of it, and in which they exist. This I cannot comprehend: to me a die seems to be nothing distinct from those things which are termed its modes or accidents. And to say a die is hard, extended, and square, is not to attribute those qualities to a subject distinct from and supporting them, but only an explication of the meaning of the word *die*.

L. Sixthly, You will say there have been a great many things explained by matter and motion: take away these and you destroy the whole corpuscular philosophy, and undermine those mechanical principles which have been applied with so much success to account for the

phenomena. In short, whatever advances have been made, either by ancient or modern philosophers, in the study of nature, do all proceed on the supposition, that corporeal substance or matter doth really exist. To this I answer, that there is not any one phenomenon explained on that supposition, which may not as well be explained without it, as might easily be made appear by an induction of particulars. To explain the phenomena is all one as to shew, why upon such and such occasions we are affected with such and such ideas. But how matter should operate on a spirit, or produce any idea in it, is what no philosopher will pretend to explain. It is therefore evident, there can be no use of matter in natural philosophy. Besides, they who attempt to account for things, do it not by corporeal substance, but by figure, motion, and other qualities, which are in truth no more than mere ideas, and therefore cannot be the cause of any thing, as hath been already shewn. See sect. XXV.

LI. Seventhly, It will upon this be demanded, whether it does not seem absurd to take away natural causes, and ascribe every thing to the immediate operation of spirits? We must no longer say upon these principles that fire heats, or water cools, but that the spirit heats, and so forth. Would not a man be deservedly laughed at who should talk after this manner? I answer, he would so; in such things we ought to *think with the learned, and speak with the vulgar.* They who to demonstration are convinced of the truth of the Copernican system, do nevertheless say the sun rises, the sun sets, or comes to the meridian: and if they affected a contrary style in common talk, it would without doubt appear very ridiculous. A little reflection on what is here said will make it manifest, that the common use of language would receive no manner of alteration or disturbance from the admission of our tenets.

LII. In the ordinary affairs of life, any phrases may

be retained so long as they excite in us proper sentiments, or dispositions to act in such a manner as is necessary for our well-being, how false soever they may be if taken in a strict and speculative sense. Nay, this is unavoidable, since propriety being regulated by custom, language is suited to the received opinions, which are not always the truest. Hence it is impossible, even in the most rigid philosophic reasonings, so far to alter the bent and genius of the tongue we speak, as never to give a handle for cavillers to pretend difficulties and inconsistencies. But a fair and ingenuous reader will collect the sense from the scope and tenor and connexion of a discourse, making allowances for those inaccurate modes of speech which use has made inevitable.

LIII. As to the opinion that there are no corporeal causes, this has been heretofore maintained by some of the schoolmen, as it is of late by others among the modern philosophers, who, though they allow matter to exist, yet will have God alone to be the immediate efficient cause of all things. These men saw, that amongst all the objects of sense there was none which had any power or activity included in it, and that by consequence this was likewise true of whatever bodies they supposed to exist without the mind, like unto the immediate objects of sense. But then, that they should suppose an innumerable multitude of created beings, which they acknowledge are not capable of producing any one effect in nature, and which therefore are made to no manner of purpose, since God might have done every thing as well without them; this I say, though we should allow it possible, must yet be a very unaccountable and extravagant supposition.

LIV. In the eighth place. The universal concurrent assent of mankind may be thought by some, an invincible argument in behalf of matter, or the existence of external things. Must we suppose the whole world to be mistaken; and if so, what cause can be assigned of so

wide-spread and predominant an error? I answer, First, That, upon a narrow inquiry, it will not perhaps be found, so many as is imagined do really believe the existence of matter or things without the mind. Strictly speaking, to believe that which involves a contradiction, or has no meaning in it, is impossible: and whether the foregoing expressions are not of that sort, I refer it to the impartial examination of the reader. In one sense indeed men may be said to believe that matter exists, that is, they act as if the immediate cause of their sensations, which affects them every moment, and is so nearly present to them, were some senseless unthinking being. But that they should clearly apprehend any meaning marked by those words, and form thereof a settled speculative opinion, is what I am not able to conceive. This is not the only instance wherein men impose upon themselves, by imagining they believe those propositions they have often heard, though at bottom they have no meaning in them.

LV. But, Secondly, Though we should grant a notion to be ever so universally and steadfastly adhered to, yet this is but a weak argument of its truth, to whoever considers what a vast number of prejudices and false opinions are every where embraced with the utmost tenaciousness, by the unreflecting (which are the far greater) part of mankind. There was a time when the antipodes and motion of the earth were looked upon as monstrous absurdities, even by men of learning: and if it be considered what a small proportion they bear to the rest of mankind, we shall find that at this day those notions have gained but a very inconsiderable footing in the world.

LVI. But it is demanded, that we assign a cause of this prejudice, and account for its obtaining in the world. To this I answer, That men knowing they perceived several ideas, whereof they themselves were not the authors, as not being excited from within, nor depending on the operation of their wills, this made them maintain, those

ideas or objects of perception had an existence independent of, and without the mind, without ever dreaming that a contradiction was involved in those words. But philosophers having plainly seen, that the immediate objects of perception do not exist without the mind, they in some degree corrected the mistake of the vulgar, but at the same time run into another which seems no less absurd, to wit, that there are certain objects really existing without the mind, or having a subsistence distinct from being perceived, of which our ideas are only images or resemblances, imprinted by those objects on the mind. And this notion of the philosophers owes its origin to the same cause with the former, namely, their being conscious that they were not the authors of their own sensations, which they evidently knew were imprinted from without, and which therefore must have some cause distinct from the minds on which they are imprinted.

LVII. But why they should suppose the ideas of sense to be excited in us by things in their likeness, and not rather have recourse to *spirit* which alone can act, may be accounted for, first, because they were not aware of the repugnancy there is, as well in supposing things like unto our ideas existing without, as in attributing to them power or activity. Secondly, because the supreme Spirit which excites those ideas in our minds, is not marked out and limited to our view by any particular finite collection of sensible ideas, as human agents are by their size, complexion, limbs, and motions. And thirdly, because his operations are regular and uniform. Whenever the course of nature is interrupted by a miracle, men are ready to own the presence of a superior agent. But when we see things go on in the ordinary course, they do not excite in us any reflection: their order and concatenation, though it be an argument of the greatest wisdom, power, and goodness in their Creator, is yet so constant and familiar to us, that we do not think them the immediate effects of a *free Spirit*: especially since in-

constancy and mutability in acting, though it be an imperfection, is looked as a mark of *freedom*.

LVIII. Tenthly, It will be objected, that the notions we advance are inconsistent with several sound truths in philosophy and mathematics. For example, the motion of the earth is now universally admitted by astronomers, as a truth grounded on the clearest and most convincing reasons; but on the foregoing principles, there can be no such thing. For motion being only an idea, it follows that if it be not perceived, it exists not; but the motion of the earth is not perceived by sense. I answer, that tenet, if rightly understood, will be found to agree with the principles we have premised: for the question, whether the earth moves or not, amounts in reality to no more than this, to wit, whether we have reason to conclude from what hath been observed by astronomers, that if we were placed in such and such circumstances, and such or such a position and distance, both from the earth and sun, we should perceive the former to move among the choir of the planets, and appearing in all respects like one of them: and this, by the established rules of nature, which we have no reason to mistrust, is reasonably collected from the phenomena.

LIX. We may, from the experience we have had of the train and succession of ideas in our minds, often make, I will not say uncertain conjectures, but sure and well-grounded predictions, concerning the ideas we shall be affected with, pursuant to a great train of actions, and be enabled to pass a right judgment of what would have appeared to us, in case we were in circumstances very different from those we are in at present. Herein consists the knowledge of nature, which may preserve its use and certainty very consistently with what has been said. It will be easy to apply this to whatever objections of the like sort may be drawn from the magnitude of the stars, or any other discoveries in astronomy or nature.

LX. In the eleventh place, it will be demanded, to

what purpose serves that curious organization of plants, and the admirable mechanism in the parts of animals; might not vegetables grow, and shoot forth leaves and blossoms, and animals perform all their motions, as well without as with all that variety of internal parts so elegantly contrived and put together, which being ideas have nothing powerful or operative in them, nor have any necessary connexion with the effects ascribed to them? If it be a spirit that immediately produces every effect by a *fiat*, or act of his will, we must think all that is fine and artificial in the works, whether of man or nature, to be made in vain. By this doctrine, though an artist hath made the spring and wheels, and every movement of a watch, and adjusted them in such a manner as he knew would produce the motions he designed; yet he must think all this done to no purpose, and that it is an intelligence which directs the index, and points to the hour of the day. If so, why may not the intelligence do it, without his being at the pains of making the movements, and putting them together? Why does not an empty case serve as well as another? And how comes it to pass, that whenever there is any fault in the going of a watch, there is some corresponding disorder to be found in the movements, which being mended by a skilful hand, all is right again? The like may be said of all the clock-work of nature, great part whereof is so wonderfully fine and subtile, as scarce to be discerned by the best microscope. In short it will be asked, how upon our principles any tolerable account can be given, or any final cause assigned, of an innumerable multitude of bodies and machines framed with the most exquisite art, which in the common philosophy have very apposite uses assigned them, and serve to explain abundance of phenomena.

LXI. To all which I answer, first, that though there were some difficulties relating to the administration of Providence, and the uses by it assigned to the several

parts of nature, which I could not solve by the foregoing principles, yet this objection could be of small weight against the truth and certainty of those things which may be proved *à priori*, with the utmost evidence. Secondly, But neither are the received principles free from the like difficulties; for it may still be demanded, to what end God should take those round-about methods of effecting things by instruments and machines, which no one can deny might have been effected by the mere command of his will, without all that *apparatus:* nay, if we narrowly consider it, we shall find the objection may be retorted with great force on those who hold the existence of those machines without the mind; for it has been made evident, that solidity, bulk, figure, motion, and the like, have no *activity* or *efficacy* in them, so as to be capable of producing any one effect in nature. See sect. xxv. Whoever therefore supposes them to exist (allowing the supposition possible) when they are not perceived, does it manifestly to no purpose; since the only use that is assigned to them, as they exist unperceived, is that they produce those perceivable effects, which in truth cannot be ascribed to any thing but spirit.

LXII. But to come nearer the difficulty, it must be observed, that though the fabrication of all those parts and organs be not absolutely necessary to the producing any effect, yet it is necessary to the producing of things in a constant, regular way, according to the laws of nature. There are certain general laws that run through the whole chain of natural effects: these are learned by the observation and study of nature, and are by men applied as well to the framing artificial things for the use and ornament of life, as to the explaining the various phenomena: which explication consists only in shewing the conformity any particular phenomenon hath to the general laws of nature, or which is the same thing, in discovering the *uniformity* there is in the production of natural effects; as will be evident to whoever shall at-

tend to the several instances, wherein philosophers pretend to account for appearances. That there is a great and conspicuous use in these regular constant methods of working observed by the supreme Agent, hath been shewn in sect. xxxi. And it is no less visible, that a particular size, figure, motion, and disposition of parts, are necessary, though not absolutely to the producing any effect, yet to the producing it according to the standing mechanical laws of nature. Thus for instance, it cannot be denied that God, or the intelligence which sustains and rules the ordinary course of things, might, if he were minded to produce a miracle, cause all the motions on the dial-plate of a watch, though nobody had ever made the movements, and put them in it: but yet if he will act agreeably to the rules of mechanism, by him for wise ends established and maintained in the creation, it is necessary that those actions of the watchmaker, whereby he makes the movements and rightly adjusts them, precede the production of the aforesaid motions; as also that any disorder in them be attended with the perception of some corresponding disorder in the movements, which being once corrected all is right again.

LXIII. It may indeed on some occasions be necessary, that the Author of nature display his overruling power in producing some appearance out of his ordinary series of things. Such exceptions from the general rules of nature are proper to surprise and awe men into an acknowledgment of the Divine Being: but then they are to be used but seldom, otherwise there is a plain reason why they should fail of that effect. Besides, God seems to choose the convincing our reason of his attributes by the works of nature, which discover so much harmony and contrivance in their make, and are such plain indication of wisdom and beneficence in their author, rather than to astonish us into a belief of his being by anomalous and surprising events.

LXIV. To set this matter in a yet clearer light, I

shall observe that what has been objected in sect. lx. amounts in reality to no more than this: ideas are not any how and at random produced, there being a certain order and connexion between them, like to that of cause and effect: there are also several combinations of them, made in a very regular and artificial manner, which seem like so many instruments in the hand of nature, that, being hid as it were behind the scenes, have a secret operation in producing those appearances which are seen on the theatre of the world, being themselves discernible only to the curious eye of the philosopher. But since one idea cannot be the cause of another, to what purpose is that connexion? And since those instruments, being barely *inefficacious perceptions* in the mind, are not subservient to the production of natural effects; it is demanded why they are made, or, in other words, what reason can be assigned why God should make us, upon a close inspection into his works, behold so great variety of ideas, so artfully laid together, and so much according to rule; it not being credible, that he would be at the expense (if one may so speak) of all that art and regularity to no purpose?

LXV. To all which my answer is, first, that the connexion of ideas does not imply the relation of *cause* and *effect*, but only of a mark or *sign* with the thing *signified*. The fire which I see is not the cause of the pain I suffer upon my approaching it, but the mark that forewarns me of it. In like manner, the noise that I hear is not the effect of this or that motion or collision of the ambient bodies, but the sign thereof. Secondly, the reason why ideas are formed into machines, that is, artificial and regular combinations, is the same with that for combining letters into words. That a few original ideas may be made to signify a great number of effects and actions, it is necessary they be variously combined together: and to the end their use be permanent and universal, these combinations must be made by *rule*, and

with *wise contrivance*. By this means abundance of information is conveyed unto us concerning what we are to expect from such and such actions, and what methods are proper to be taken for the exciting such and such ideas: which in effect is all that I conceive to be distinctly meant, when it is said that by discerning the figure, texture, and mechanism, of the inward parts of bodies, whether natural or artificial, we may attain to know the several uses and properties depending thereon, or the nature of the thing.

LXVI. Hence it is evident, that those things which under the notion of a cause co-operating or concurring to the production of effects, are altogether inexplicable, and run us into great absurdities, may be very naturally explained, and have a proper and obvious use assigned them, when they are considered only as marks or signs for our information. And it is the searching after, and endeavouring to understand, those signs instituted by the Author of nature, that ought to be the employment of the natural philosopher, and not the pretending to explain things by corporeal causes; which doctrine seems to have too much estranged the minds of men from that active Principle, that supreme and wise Spirit, "in whom we live, move, and have our being."

LXVII. In the twelfth place, it may perhaps be objected, that though it be clear from what has been said, that there can be no such thing as an inert, senseless, extended, solid, figured, moveable substance, existing without the mind, such as philosophers describe matter; yet if any man shall leave out of his idea of *matter*, the positive ideas of extension, figure, solidity, and motion, and say that he means only by that word, an inert senseless substance, that exists without the mind, or unperceived, which is the occasion of our ideas, or at the presence whereof God is pleased to excite ideas in us; it doth not appear, but that matter taken in this sense may possibly exist. In answer to which I say, first,

that it seems no less absurd to suppose a substance without accidents, than it is to suppose accidents without a substance. But secondly, though we should grant this unknown substance may possibly exist, yet where can it be supposed to be? That it exists not in the mind is agreed, and that it exists not in place is no less certain; since all extension exists only in the mind, as hath been already proved. It remains therefore that it exists no where at all.

LXVIII. Let us examine a little the description that is here given us of *matter*. It neither acts, nor perceives, nor is perceived: for this is all that is meant by saying it is an inert, senseless, unknown substance; which is a definition entirely made up of negatives, excepting only the relative notion of its standing under or supporting: but then it must be observed, that it *supports* nothing at all; and how nearly this comes to the description of a *nonentity*, I desire may be considered. But, say you, it is the *unknown occasion*, at the presence of which ideas are excited in us by the will of God. Now I would fain know how any thing can be present to us, which is neither perceivable by sense nor reflection, nor capable of producing any idea in our minds, nor is at all extended, nor hath any form, nor exists in any place. The words *to be present*, when thus applied, must needs be taken in some abstract and strange meaning, and which I am not able to comprehend.

LXIX. Again, let us examine what is meant by *occasion*: so far as I can gather from the common use of language, that word signifies, either the agent which produces any effect, or else something that is observed to accompany, or go before it, in the ordinary course of things. But when it is applied to matter as above described, it can be taken in neither of those senses. For matter is said to be passive and inert, and so cannot be an agent or efficient cause. It is also unperceivable, as being devoid of all sensible qualities, and so cannot be

the occasion of our perceptions in the latter sense: as when the burning my finger is said to be the occasion of the pain that attends it. What therefore can be meant by calling matter an *occasion?* this term is either used in no sense at all, or else in some very distant from its received signification.

LXX. You will perhaps say that matter, though it be not perceived by us, is nevertheless perceived by God, to whom it is the occasion of exciting ideas in our minds. For, say you, since we observe our sensations to be imprinted in an orderly and constant manner, it is but reasonable to suppose there are certain constant and regular occasions of their being produced. That is to say, that there are certain permanent and distinct parcels of matter corresponding to our ideas, which, though they do not excite them in our minds, or any ways immediately affect us, as being altogether passive and unperceivable to us, they are nevertheless to God, by whom they are perceived, as it were so many occasions to remind him when and what ideas to imprint on our minds: that so things may go on in a constant uniform manner.

LXXI. In answer to this I observe, that as the notion of matter is here stated, the question is no longer concerning the existence of a thing distinct from *spirit* and *idea*, from perceiving and being perceived: but whether there are not certain ideas, of I know not what sort, in the mind of God, which are so many marks or notes that direct him how to produce sensations in our minds, in a constant and regular method; much after the same manner as a musician is directed by the notes of music to produce that harmonious train and composition of sound, which is called a *tune*; though they who hear the music do not perceive the notes, and may be entirely ignorant of them. But this notion of matter seems too extravagant to deserve a confutation. Besides, it is in effect no objection against what we have advanced, to wit, that there is no senseless unperceived *substance*.

LXXII. If we follow the light of reason, we shall, from the constant uniform method of our sensations, collect the goodness and wisdom of the *Spirit* who excites them in our minds. But this is all that I can see reasonably concluded from thence. To me, I say, it is evident, that the being of a *Spirit infinitely wise, good, and powerful,* is abundantly sufficient to explain all the appearances of nature. But as for *inert senseless matter,* nothing that I perceive has any the least connexion with it, or leads to the thoughts of it. And I would fain see any one explain any the meanest *phenomenon* in nature by it, or shew any manner of reason, though in the lowest rank of probability, that he can have for its existence; or even make any tolerable sense or meaning of that supposition. For as to its being an occasion, we have, I think, evidently shewn, that with regard to us it is no occasion: it remains therefore that it must be, if at all, the occasion to God of exciting ideas in us; and what this amounts to we have just now seen.

LXXIII. It is worth while to reflect a little on the motives which induced men to suppose the existence of material substance; that so having observed the gradual ceasing and expiration of those motives or reasons, we may proportionably withdraw the assent that was grounded on them. First therefore, it was thought that colour, figure, motion, and the rest of the sensible qualities or accidents, did really exist without the mind; and for this reason, it seemed needful to suppose some unthinking *substratum* or *substance* wherein they did exist, since they could not be conceived to exist by themselves. Afterwards, in process of time, men being convinced that colours, sounds, and the rest of the sensible secondary qualities, had no existence without the mind, they stripped this *substratum* or material substance of those qualities, leaving only the primary ones, figure, motion, and such like, which they still conceived to exist without the mind, and consequently to stand in need of a material support. But it having been shewn, that none,

even of these, can possibly exist otherwise than in a spirit or mind which perceives them, it follows that we have no longer any reason to suppose the being of *matter*. Nay, that it is utterly impossible there should be any such thing, so long as that word is taken to denote an *unthinking substratum* of qualities or accidents, wherein they exist without the mind.

LXXIV. But though it be allowed by the *materialists* themselves, that matter was thought of only for the sake of supporting accidents; and the reason entirely ceasing, one might expect the mind should naturally, and without any reluctance at all, quit the belief of what was solely grounded thereon; yet the prejudice is rivetted so deeply in our thoughts, that we can scarce tell how to part with it, and are therefore inclined, since the *thing* itself is indefensible, at least to retain the *name;* which we apply to I know not what abstracted and indefinite notions of *being* or *occasion*, though without any show of reason, at least so far as I can see. For what is there on our part, or what do we perceive amongst all the ideas, sensations, notions, which are imprinted on our minds, either by sense or reflection, from whence may be inferred the existence of an inert, thoughtless, unperceived occasion? and on the other hand, on the part of an *all-sufficient Spirit*, what can there be that should make us believe, or even suspect, he is *directed* by an inert occasion to excite ideas in our minds?

LXXV. It is a very extraordinary instance of the force of prejudice, and much to be lamented, that the mind of man retains so great a fondness against all the evidence of reason, for a stupid thoughtless *somewhat*, by the interposition whereof it would, as it were, screen itself from the providence of God, and remove him farther off from the affairs of the world. But though we do the utmost we can, to secure the belief of *matter*, though when reason forsakes us, we endeavour to support our opinion on the bare possibility of the thing, and

though we indulge ourselves in the full scope of an imagination not regulated by reason, to make out that poor *possibility*, yet the upshot of all is, that there are certain *unknown ideas* in the mind of God; for this, if any thing, is all that I conceive to be meant by *occasion* with regard to God. And this, at the bottom, is no longer contending for the *thing*, but for the *name*.

LXXVI. Whether therefore there are such ideas in the mind of God, and whether they may be called by name *matter*, I shall not dispute. But if you stick to the notion of an unthinking substance, or support of extension, motion, and other sensible qualities, then to me it is most evidently impossible there should be any such thing. Since it is a plain repugnancy, that those qualities should exist in or be supported by an unperceiving substance.

LXXVII. But, say you, though it be granted that there is no thoughtless support of extension, and the other qualities or accidents which we perceive; yet there may, perhaps, be some inert unperceiving substance, or *substratum* of some other qualities, as incomprehensible to us as colours are to a man born blind, because we have not a sense adapted to them. But if we had a new sense, we should possibly no more doubt of their existence, than a blind man made to see does of the existence of light and colours. I answer, first, if what you mean by the word *matter* be only the unknown support of unknown qualities, it is no matter whether there is such a thing or not, since it no way concerns us; and I do not see the advantage there is in disputing about we know not *what*, and we know not *why*.

LXXVIII. But secondly, if we had a new sense, it could only furnish us with new ideas or sensations: and then we should have the same reason against their existing in an unperceiving substance, that has been already offered with relation to figure, motion, colour, and the like. Qualities, as hath been shewn, are nothing else

but *sensations* or *ideas*, which exist only in a *mind* perceiving them; and this is true not only of the ideas we are acquainted with at present, but likewise of all possible ideas whatsoever.

LXXIX. But you will insist, What if I have no reason to believe the existence of matter, what if I cannot assign any use to it, or explain any thing by it, or even conceive what is meant by that word? yet still it is no contradiction to say that matter exists, and that this matter is *in general* a *substance*, or *occasion of ideas*; though, indeed, to go about to unfold the meaning, or adhere to any particular explication of those words, may be attended with great difficulties. I answer, when words are used without a meaning, you may put them together as you please, without danger of running into a contradiction. You may say, for example, that *twice two* is equal to *seven*, so long as you declare you do not take the words of that proposition in their usual acceptation, but for marks of you know not what. And by the same reason you may say, there is an inert thoughtless substance without accidents, which is the occasion of our ideas. And we shall understand just as much by one proposition as the other.

LXXX. In the last place, you will say, What if we give up the cause of material substance, and assert, that matter is an unknown *somewhat*, neither substance nor accident, spirit nor idea, inert, thoughtless, indivisible, immoveable, unextended, existing in no place? for, say you, whatever may be urged against *substance* or *occasion*, or any other positive or relative notion of matter, hath no place at all, so long as this *negative* definition of matter is adhered to. I answer, you may, if so it shall seem good, use the word *matter* in the same sense that other men use *nothing*, and so make those terms convertible in your style. For after all, this is what appears to me to be the result of that definition; the parts whereof when I consider with attention, either collectively or separate

from each other, I do not find that there is any kind of effect or impression made on my mind different from what is excited by the term *nothing*.

LXXXI. You will reply, perhaps, that in the foresaid definition is included, what doth sufficiently distinguish it from nothing, the positive, abstract idea of *quiddity, entity*, or *existence*. I own, indeed, that those who pretend to the faculty of framing abstract general ideas, do talk as if they had such an idea, which is, say they, the most abstract and general notion of all, that is to me the most incomprehensible of all others. That there are a great variety of spirits of different orders and capacities, whose faculties, both in number and extent, are far exceeding those the Author of my being has bestowed on me, I see no reason to deny. And for me to pretend to determine by my own few, stinted, narrow inlets of perception, what ideas the inexhaustible power of the supreme Spirit may imprint upon them, were certainly the utmost folly and presumption. Since there may be, for ought that I know, innumerable sorts of ideas or sensations, as different from one another, and from all that I have perceived, as colours are from sounds. But how ready soever I may be, to acknowledge the scantiness of my comprehension, with regard to the endless variety of spirits and ideas, that might possibly exist, yet for any one to pretend to a notion of entity or existence *abstracted* from *spirit* and *idea*, from perceiving and being perceived, is, I suspect, a downright repugnancy, and trifling with words. It remains that we consider the objections, which may possibly be made on the part of religion.

LXXXII. Some there are who think, that though the arguments for the real existence of bodies, which are drawn from reason, be allowed not to amount to demonstration, yet the Holy Scriptures are so clear in the point, as will sufficiently convince every good Christian, that bodies do really exist, and are something more than

mere ideas; there being in holy writ innumerable facts related, which evidently suppose the reality of timber and stone, mountains and rivers, and cities, and human bodies. To which I answer, that no sort of writings whatever, sacred or profane, which use those and the like words in the vulgar acceptation, or so as to have a meaning in them, are in danger of having their truth called in question by our doctrine. That all those things do really exist, that there are bodies, even corporeal substances, when taken in the vulgar sense, has been shewn to be agreeable to our principles: and the difference betwixt *things* and *ideas*, *realities* and *chimeras*, has been distinctly explained.* And I do not think, that either what philosophers call *matter*, or the existence of objects without the mind, is any where mentioned in Scripture.

LXXXIII. Again, whether there be or be not external things, it is agreed on all hands, that the proper use of words, is the marking our conceptions, or things only as they are known and perceived by us; whence it plainly follows, that in the tenets we have laid down, there is nothing inconsistent with the right use and significancy of *language*, and that discourse of what kind soever, so far as it is intelligible, remains undisturbed. But all this seems so manifest, from what hath been set forth in the premises, that it is needless to insist any farther on it.

LXXXIV. But it will be urged, that miracles do, at least, lose much of their stress and import by our principles. What must we think of Moses's rod, was it not *really* turned into a serpent, or was there only a change of *ideas* in the minds of the spectators? And can it be supposed, that our Saviour did no more at the marriage-feast in Cana, than impose on the sight, and smell, and taste, of the guests, so as to create in them the appearance or idea only of wine? The same may be said of all other miracles: which, in consequence of the foregoing princi-

* Sect. xxix. xxx. xxxiii. xxxvi. &c.

ples, must be looked upon only as so many cheats, or illusions of fancy. To this I reply, that the rod was changed into a real serpent, and the water into real wine. That this doth not, in the least, contradict what I have elsewhere said, will be evident from sect. xxxiv. and xxxv. But this business of *real* and *imaginary* hath been already so plainly and fully explained, and so often referred to, and the difficulties about it are so easily answered from what hath gone before, that it were an affront to the reader's understanding, to resume the explication of it in this place. I shall only observe, that if at table all who were present should see, and smell, and taste, and drink wine, and find the effects of it, with me there could be no doubt of its reality. So that at bottom, the scruple concerning real miracles hath no place at all on ours, but only on the received principles, and consequently maketh rather *for* than *against* what hath been said.

LXXXV. Having done with the objections, which I endeavoured to propose in the clearest light, and given them all the force and weight I could, we proceed in the next place to take a view of our tenets in their consequences. Some of these appear at first sight, as that several difficult and obscure questions, on which abundance of speculation hath been thrown away, are entirely banished from philosophy. Whether corporeal substance can think? whether matter be infinitely divisible? and how it operates on spirit? these and the like inquiries have given infinite amusement to philosophers in all ages. But depending on the existence of *matter*, they have no longer any place on our principles. Many other advantages there are, as well with regard to *religion* as the *sciences*, which it is easy for any one to deduce from what hath been premised. But this will appear more plainly in the sequel.

LXXXVI. From the principles we have laid down, it follows, human knowledge may naturally be reduced to two heads, that of *ideas*, and that of *spirits*. Of each of

these I shall treat in order. And first as to ideas or unthinking things, our knowledge of these hath been very much obscured and confounded, and we have been led into very dangerous errors, by supposing a twofold existence of the objects of sense, the one *intelligible* or in the mind, the other *real* and without the mind; whereby unthinking things are thought to have a natural subsistence of their own, distinct from being perceived by spirits. This which, if I mistake not, hath been shewn to be a most groundless and absurd notion, is the very root of scepticism; for so long as men thought that real things subsisted without the mind, and that their knowledge was only so far forth *real* as it was conformable to *real things*, it follows, they could not be certain that they had any real knowledge at all. For how can it be known, that the things which are perceived, are comformable to those which are not perceived, or exist without the mind?

LXXXVII. Colour, figure, motion, extension, and the like, considered only as so many *sensations* in the mind, are perfectly known, there being nothing in them which is not perceived. But if they are looked on as notes or images referred to *things* or *archetypes* existing without the mind, then we are involved all in scepticism. We see only the appearances, and not the real qualities, of things. What may be the extension, figure, or motion, of any thing really and absolutely, or in itself, it is impossible for us to know, but only the proportion or the relation they bear to our senses. Things remaining the same, our ideas vary; and which of them, or even whether any of them at all, represent the true quality really existing in the thing, it is out of our reach to determine. So that, for aught we know, all we see, hear, and feel, may be only phantom and vain chimera, and not at all agree with the real things existing in *rerum natura*. All this scepticism follows, from our supposing a difference between *things* and *ideas*, and that the former have a subsistence without the mind,

or unperceived. It were easy to dilate on this subject, and shew how the arguments urged by sceptics in all ages depend on the supposition of external objects.

LXXXVIII. So long as we attribute a real existence to unthinking things, distinct from their being perceived, it is not only impossible for us to know with evidence the nature of any real unthinking being, but even that it exists. Hence it is, that we see philosophers distrust their senses, and doubt of the existence of heaven and earth, of every thing they see or feel, even of their own bodies. And after all their labour and struggle of thought, they are forced to own, we cannot attain to any self-evident or demonstrative knowledge of the existence of sensible things. But all this doubtfulness, which so bewilders and confounds the mind, and makes *philosophy* ridiculous in the eyes of the world, vanishes if we annex a meaning to our words, and do not amuse ourselves with the terms *absolute, external, exist,* and such-like, signifying we know not what. I can as well doubt of my own being, as of the being of those things which I actually perceive by sense: it being a manifest contradiction, that any sensible object should be immediately perceived by sight or touch, and at the same time have no existence in nature, since the very existence of an unthinking being consists in *being perceived.*

LXXXIX. Nothing seems of more importance, towards erecting a firm system of sound and real knowledge, which may be proof against the assaults of scepticism, than to lay the beginning in a distinct explication of what is meant by *thing, reality, existence:* for in vain shall we dispute concerning the real existence of things, or pretend to any knowledge thereof, so long as we have not fixed the meaning of those words. *Thing* or *being* is the most general name of all; it comprehends under it two kinds entirely distinct and heterogeneous, and which have nothing common but the name, to wit, *spirits* and *ideas.* The former are *active indivisible, sub-*

stances: the latter are *inert, fleeting, dependent beings,* which subsist not by themselves, but are supported by, or exist in, minds or spiritual substances. We comprehend our own existence by inward feeling or reflection, and that of other spirits by reason. We may be said to have some knowledge or notion of our own minds, of spirits and active beings, whereof in a strict sense we have not ideas. In like manner we know and have a notion of relations between things or ideas, which relations are distinct from the ideas or things related, inasmuch as the latter may be perceived by us without our perceiving the former. To me it seems that ideas, spirits, and relations, are, all in their respective kinds, the object of human knowledge and subject of discourse: and that the term *idea* would be improperly extended to signify every thing we know or have any notion of.

XC. Ideas imprinted on the senses are real things, or do really exist; this we do not deny, but we deny they can subsist without the minds which perceive them, or that they are resemblances of any archetypes existing without the mind: since the very being of a sensation or idea consists in being perceived, and an idea can be like nothing but an idea. Again, the things perceived by sense may be termed *external,* with regard to their origin, in that they are not generated from within, by the mind itself, but imprinted by a spirit distinct from that which perceives them. Sensible objects may likewise be said to be without the mind, in another sense, namely, when they exist in some other mind. Thus when I shut my eyes, the things I saw may still exist, but it must be in another mind.

XCI. It were a mistake to think, that what is here said derogates in the least from the reality of things. It is acknowledged on the received principles, that extension, motion, and in a word all sensible qualities, have need of a support, as not being able to subsist by themselves. But the objects perceived by sense, are allowed

to be nothing but combinations of those qualities, and consequently cannot subsist by themselves. Thus far it is agreed on all hands. So that in denying the things perceived by sense, an existence independent of a substance, or support wherein they may exist, we detract nothing from the received opinion of their *reality*, and are guilty of no innovation in that respect. All the difference is, that according to us the unthinking beings perceived by sense have no existence distinct from being perceived, and cannot therefore exist in any other substance, than those unextended, indivisible substances, or *spirits*, which act, and think, and perceive them: whereas philosophers vulgarly hold, that the sensible qualities exist in an inert, extended, unperceiving substance, which they call *matter*, to which they attribute a natural subsistence, exterior to all thinking beings, or distinct from being perceived by any mind whatsoever, even the eternal mind of the Creator, wherein they suppose only ideas of the corporeal substances created by him: if indeed they allow them to be at all created.

XCII. For as we have shewn the doctrine of matter or corporeal substance, to have been the main pillar and support of scepticism, so likewise upon the same foundation have been raised all the impious schemes of Atheism and irreligion. Nay, so great a difficulty hath it been thought, to conceive matter produced out of nothing, that the most celebrated among the ancient philosophers, even of these who maintained the being of a God, have thought matter to be uncreated, and coeternal with him. How great a friend material substance hath been to Atheists in all ages, were needless to relate. All their monstrous systems have so visible and necessary a dependence on it, that when this corner-stone is once removed, the whole fabric cannot choose but fall to the ground; insomuch that it is no longer worth while to bestow a particular consideration on the absurdities of every wretched sect of Atheists.

XCIII. That impious and profane persons should readily fall in with those systems which favour their inclinations, by deriding immaterial substance, and supposing the soul to be divisible and subject to corruption as the body; which exclude all freedom, intelligence, and design, from the formation of things, and instead thereof make a self-existent, stupid, unthinking substance, the root and origin of all beings:—that they should hearken to those who deny a Providence or inspection of a superior mind over the affairs of the world, attributing the whole series of events either to blind chance or fatal necessity, arising from the impulse of one body on another:—all this is very natural. And on the other hand, when men of better principles observe the enemies of religion lay so great a stress on *unthinking matter*, and all of them use so much industry and artifice to reduce every thing to it; methinks they should rejoice to see them deprived of their grand support, and driven from that only fortress, without which your Epicureans, Hobbists, and the like, have not even the shadow of a pretence, but become the most cheap and easy triumph in the world.

XCIV. The existence of matter, or bodies unperceived, has not only been the main support of Atheists and fatalists, but on the same principle doth idolatry likewise in all its various forms depend. Did men but consider that the sun, moon, and stars, and every other object of the senses, are only so many sensations in their minds, which have no other existence but barely being perceived, doubtless they would never fall down and worship their own *ideas;* but rather address their homage to that ETERNAL INVISIBLE MIND which produces and sustains all things.

XCV. The same absurd principle, by mingling itself with the articles of our faith, hath occasioned no small difficulties to Christians. For example, about the *resurrection*, how many scruples and objections have been

raised by Socinians and others! But do not the most plausible of them depend on the supposition, that a body is denominated the *same*, with regard not to the form or that which is perceived by sense, but the material substance which remains the same under several forms? Take away this *material substance*, about the identity whereof all the dispute is, and mean by *body* what every plain ordinary person means by that word, to wit, that which is immediately seen and felt, which is only a combination of sensible qualities, or ideas; and then their unanswerable objections come to nothing.

XCVI. Matter being once expelled out of nature, drags with it so many sceptical and impious notions, such an incredible number of disputes and puzzling questions, which have been thorns in the sides of divines as well as philosophers, and made so much fruitless work for mankind; that if the arguments we have produced against it, are not found equal to demonstration (as to me they evidently seem), yet I am sure all friends to knowledge, peace, and religion, have reason to wish they were.

XCVII. Beside the external existence of the objects of perception, another great source of errors and difficulties, with regard to ideal knowledge, is the doctrine of *abstract ideas*, such as it hath been set forth in the Introduction. The plainest things in the world, those we are most intimately acquainted with, and perfectly know, when they are considered in an abstract way, appear strangely difficult and incomprehensible. Time, place, and motion, taken in particular or concrete, are what every body knows; but having passed through the hands of a metaphysician, they become too abstract and fine to be apprehended by men of ordinary sense. Bid your servant meet you at such a *time*, in such a *place*, and he shall never stay to deliberate on the meaning of those words: in conceiving that particular time and place, or the motion by which he is to get thither,

he finds not the least difficulty. But if *time* be taken, exclusive of all those particular actions and ideas that diversify the day, merely for the continuation of existence, or duration in abstract, then it will perhaps gravel even a philosopher to comprehend it.

XCVIII. Whenever I attempt to frame a simple idea of *time*, abstracted from the succession of ideas in my mind, which flows uniformly, and is participated by all beings, I am lost and embrangled in inextricable difficulties. I have no notion of it at all, only I hear others say, it is infinitely divisible, and speak of it in such a manner as leads me to entertain odd thoughts of my existence: since that doctrine lays one under an absolute necessity of thinking, either that he passes away innumerable ages without a thought, or else that he is annihilated every moment of his life: both which seem equally absurd. Time therefore being nothing, abstracted from the succession of ideas in our minds, it follows that the duration of any finite spirit must be estimated by the number of ideas or actions succeeding each other in that same spirit or mind. Hence it is a plain consequence that the soul always thinks: and in truth whoever shall go about to divide in his thoughts, or abstract the *existence* of a spirit from its *cogitation*, will, I believe, find it no easy task.

XCIX. So likewise, when we attempt to abstract extension and motion from all other qualities, and consider by themselves, we presently lose sight of them, and run into great extravagances; all which depend on a twofold abstraction: first, it is supposed that extension, for example, may be abstracted from all other sensible qualities; and, secondly, that the entity of extension may be abstracted from its being perceived. But whoever shall reflect, and take care to understand what he says, will, if I mistake not, acknowledge that all sensible qualities are alike *sensations*, and alike *real*; that where the extension is, there is the colour too, to wit, in his mind,

and that their archetypes can exist only in some other *mind:* and that the objects of sense are nothing but those sensations combined, blended, or (if one may so speak) concreted together: none of all which can be supposed to exist unperceived.

C. What it is for a man to be happy, or an object of good, every one may think he knows. But to frame an abstract idea of *happiness*, prescinded from all particular pleasure, or of *goodness*, from every thing that is good, this is what few can pretend to. So likewise, a man may be just and virtuous, without having precise ideas of *justice* and *virtue*. The opinion that those and the like words stand for general notions abstracted from all particular persons and actions, seems to have rendered morality difficult, and the study thereof of less use to mankind. And in effect, the doctrine of *abstraction* has not a little contributed towards spoiling the most useful parts of knowledge.

CI. The two great provinces of speculative science, conversant about ideas received from sense and their relations, are *natural philosophy* and *mathematics*; with regard to each of these I shall make some observations. And first, I shall say somewhat of natural philosophy. On this subject it is that the sceptics triumph: all that stock of arguments they produce to depreciate our faculties, and make mankind appear ignorant and low, are drawn principally from this head, to wit, that we are under an invincible blindness as to the *true* and *real* nature of things. This they exaggerate, and love to enlarge on. We are miserably bantered, say they, by our senses, and amused only with the outside and show of things. The real essence, the internal qualities, and constitution of every the meanest object, is hid from our view; something there is in every drop of water, every grain of sand, which it is beyond the power of human understanding to fathom or comprehend. But it is evident from what has been shewn, that all this complaint is ground-

less; and that we are influenced by false principles to that degree as to mistrust our senses, and think we know nothing of those things which we perfectly comprehend.

CII. One great inducement to our pronouncing ourselves ignorant of the nature of things, is the current opinion that every thing includes within itself the cause of its properties: or that there is in each object an inward essence, which is the source whence its discernible qualities flow, and whereon they depend. Some have pretended to account for appearances by occult qualities, but of late they are mostly resolved into mechanical causes; to wit, the figure, motion, weight, and suchlike qualities, of insensible particles: whereas in truth, there is no other agent or efficient cause than *spirit*, it being evident that motion, as well as all other *ideas*, is perfectly inert. (See sect. xxv.) Hence, to endeavour to explain the production of colours or sounds by figure, motion, magnitude, and the like, must needs be labour in vain. And accordingly we see the attempts of that kind are not at all satisfactory. Which may be said in general of those instances, wherein one idea or quality is assigned for the cause of another. I need not say how many hypotheses and speculations are left out, and how much the study of nature is abridged by this doctrine.

CIII. The great mechanical principle now in vogue is attraction. That a stone falls to the earth, or the sea swells towards the moon, may to some appear sufficiently explained thereby. But how are we enlightened by being told this is done by attraction? Is it that that word signifies the manner of the tendency, and that it is by the mutual drawing of bodies, instead of their being impelled or protruded towards each other? But nothing is determined of the manner or action, and it may as truly (for aught we know) be termed *impulse* or *protrusion* as *attraction*. Again, the parts of steel we see cohere firmly together, and this also is accounted for by attraction; but in this, as in the other instances, I do

not perceive that any thing is signified besides the effect itself; for as to the manner of the action whereby it is produced, or the cause which produces it, these are not so much as aimed at.

CIV. Indeed if we take a view of the several phenomena, and compare them together, we may observe some likeness and conformity between them. For example, in the falling of a stone to the ground, in the rising of the sea towards the moon, in cohesion and crystalization, there is something alike, namely a union or mutual approach of bodies. So that any one of these or the like phenomena may not seem strange or surprising to a man who hath nicely observed and compared the effects of nature. For that only is thought so which is uncommon, or a thing by itself, and out of the ordinary course of our observation. That bodies should tend towards the centre of the earth, is not thought strange, because it is what we perceive every moment of our lives. But that they should have a like gravitation towards the centre of the moon, may seem odd and unaccountable to most men, because it is discerned only in the tides. But a philosopher, whose thoughts take in a larger compass of nature, having observed a certain similitude of appearances, as well in the heavens as the earth, that argue innumerable bodies to have a mutual tendency towards each other, which he denotes by the general name *attraction*, whatever can be reduced to that he thinks justly accounted for. Thus he explains the tides by the attraction of the terraqueous globe towards the moon, which to him doth not appear odd or anomalous, but only a particular example of a general rule or law of nature.

CV. If therefore we consider the difference there is betwixt natural philosophers and other men, with regard to their knowledge of the phenomena, we shall find it consists, not in an exacter knowledge of the efficient cause that produces them, for that can be no other than the *will of a spirit*, but only in a greater largeness of

comprehension; whereby analogies, harmonies, and agreements, are discovered in the works of nature, and the particular effects explained; that is, reduced to general rules, (see sect. lxii.) which rules, grounded on the analogy and uniformness observed in the production of natural effects, are most agreeable, and sought after by the mind; for that they extend our prospect beyond what is present and near to us, and enable us to make very probable conjectures touching things that may have happened at very great distances of time and place, as well as to predict things to come; which sort of endeavour towards omniscience, is much affected by the mind.

CVI. But we should proceed warily in such things: for we are apt to lay too great a stress on analogies, and, to the prejudice of truth, humour that eagerness of mind whereby it is carried to extend its knowledge into general theorems. For example, gravitation or mutual attraction, because it appears in many instances, some are straightway for pronouncing *universal*; and that to *attract, and be attracted by every other body, is an essential quality inherent in all bodies whatsoever.* Whereas it appears the fixed stars have no such tendency towards each other: and so far is that gravitation from being *essential* to bodies, that in some instances a quite contrary principle seems to shew itself: as in the perpendicular growth of plants and the elasticity of the air. There is nothing necessary or essential in the case, but it depends entirely on the will of the *governing spirit*, who causes certain bodies to cleave together, or tend towards each other, according to various laws, whilst he keeps others at a fixed distance; and to some he gives a quite contrary tendency to fly asunder, just as he sees convenient.

CVII. After what has been premised, I think we may lay down the following conclusions. First, it is plain philosophers amuse themselves in vain, when they in-

quire for any natural efficient cause distinct from a *mind* or *spirit*. Secondly, considering the whole creation is the workmanship of a *wise and good agent*, it should seem to become philosophers, to employ their thoughts (contrary to what some hold) about the final causes of things: and I must confess, I see no reason, why pointing out the various ends to which natural things are adapted, and for which they were originally with unspeakable wisdom contrived, should not be thought one good way of accounting for them, and altogether worthy a philosopher. Thirdly, from what hath been premised no reason can be drawn, why the history of nature should not still be studied; and observations and experiments made, which, that they are of use to mankind, and enable us to draw any conclusions, is not the result of any immutable habitudes, or relations between things themselves, but only of God's goodness and kindness to men in the administration of the world. (See sect. xxx. and xxxi.) Fourthly, by a diligent observation of the phenomena within our view, we may discover the general laws of nature, and from them deduce the other phenomena, I do not say *demonstrate*; for all deductions of that kind depend on a supposition that the Author of nature always operates uniformly, and in a constant observance of those rules we take for principles: which we cannot evidently know.

CVIII. Those men who frame general rules from the phenomena, and afterwards derive the phenomena from these rules, seem to consider signs rather than causes. A man may well understand natural signs without knowing their analogy, or being able to say by what rule a thing is so or so. And as it is very possible to write improperly, through too strict an observance of general grammar-rules; so in arguing from general rules of nature, it is not impossible we may extend the analogy too far, and by that means run into mistakes.

CIX. As in reading other books, a wise man will

choose to fix his thoughts on the sense and apply it to use, rather than lay them out in grammatical remarks on the language; so in perusing the volume of nature, it seems beneath the dignity of the mind to affect an exactness in reducing each particular phenomenon to general rules, or shewing how it follows from them. We should propose to ourselves nobler views, such as to recreate and exalt the mind, with a prospect of the beauty, order, extent, and variety, of natural things: hence, by proper inferences, to enlarge our notions of the grandeur, wisdom, and beneficence, of the Creator: and lastly, to make several parts of the creation, so far as in us lies, subservient to the ends they were designed for; God's glory, and the sustentation and comfort of ourselves and fellow-creatures.

CX. The best key for the aforesaid analogy, or natural science, will be easily acknowledged to be a certain celebrated treatise of *mechanics:* in the entrance of which justly-admired treatise, time, space, and motion, are distinguished into *absolute* and *relative, true* and *apparent, mathematical* and *vulgar:* which distinction, as it is at large explained by the author, doth suppose those quantities to have an existence without the mind: and that they are ordinarily conceived with relation to sensible things, to which nevertheless, in their own nature, they bear no relation at all.

CXI. As for *time,* as it is there taken in an absolute or abstracted sense, for the duration or perseverance of the existence of things, I have nothing more to add concerning it, after what hath been already said on that subject, sect. xcvii. and xcviii. For the rest, this celebrated author holds there is an *absolute space,* which, being unpereeivable to sense, remains in itself similar and immoveable: and relative space to be the measure thereof, which being moveable, and defined by its situation in respect of sensible bodies, is vulgarly taken for immoveable space. *Place* he defines to be that part of space

which is occupied by any body. And according as the space is absolute or relative, so also is the place. *Absolute motion* is said to be the translation of a body from absolute place to absolute place, as relative motion is from one relative place to another. And because the parts of absolute space do not fall under our senses, instead of them we are obliged to use their sensible measures: and so define both place and motion with respect to bodies, which we regard as immoveable. But it is said, in philosophical matters we must abstract from our senses, since it may be, that none of those bodies which seem to be quiescent, are truly so: and the same thing which is moved relatively, may be really at rest. As likewise one and the same body may be in relative rest and motion, or even moved with contrary relative motions at the same time, according as its place is variously defined. All which ambiguity is to be found in the apparent motions, but not at all in the true or absolute, which should therefore be alone regarded in philosophy. And the true, we are told, are distinguished from apparent or relative motions by the following properties. First, in true or absolute motion, all parts which preserve the same position with respect to the whole, partake of the motions of the whole. Secondly, the place being moved, that which is placed therein is also moved: so that a body moving in a place which is in motion, doth participate the motion of its place. Thirdly, true motion is never generated or changed, otherwise than by force impressed on the body itself. Fourthly, true motion is always changed by force impressed on the body moved. Fifthly, in circular motion barely relative, there is no centrifugal force, which nevertheless in that which is true or absolute, is proportional to the quantity of motion.

CXII. But notwithstanding what hath been said, it doth not appear to me, that there can be any motion other than *relative*: so that to conceive motion, there

must be at least conceived two bodies, whereof the distance or position in regard to each other is varied. Hence, if there was one only body in being, it could not possibly be moved. This seems evident, in that the idea I have of motion doth necessarily include relation.

CXIII. But though in every motion it be necessary to conceive more bodies than one, yet it may be that one only is moved; namely, that on which the force causing the change of distance is impressed, or, in other words, that to which the action is applied. For however some may define relative motion, so as to term that body *moved*, which changes its distance from some other body, whether the force or action causing that change were applied to it or no: yet, as relative motion is that which is perceived by sense, and regarded in the ordinary affairs of life, it should seem that every man of common sense knows what it is, as well as the best philosopher: now I ask any one, whether, in his sense of motion as he walks along the streets, the stones he passes over may be said to *move*, because they change distance with his feet? To me it seems, that though motion includes a relation of one thing to another, yet it is not necessary that each term of the relation be denominated from it. As a man may think of somewhat which doth not think, so a body may be moved to or from another body, which is not therefore itself in motion.

CXIV. As the place happens to be variously defined, the motion which is related to it varies. A man in a ship may be said to be quiescent with relation to the sides of the vessel, and yet move with relation to the land: or he may move eastward in respect of the one, and westward in respect of the other. In the common affairs of life, men never go beyond the earth to define the place of any body: and what is quiescent in respect of that, is accounted *absolutely* to be so. But philosophers who have a greater extent of thought, and juster notions of the system of things, discover even the earth itself to be

moved. In order therefore to fix their notions, they seem to conceive the corporeal world as finite, and the utmost unmoved walls or shell thereof to be the place, whereby they estimate true motions. If we sound our own conceptions, I believe we may find all the absolute motion we can frame an idea of, to be at bottom no other than relative motion thus defined. For as hath been already observed, absolute motion exclusive of all external relation is incomprehensible: and to this kind of relative motion all the abovementioned properties, causes, and effects, ascribed to absolute motion, will, if I mistake not, be found to agree. As to what is said of the centrifugal force, that it doth not at all belong to circular relative motion; I do not see how this follows from the experiment which is brought to prove it. See *Philosophiæ Naturalis Principia Mathematica, in Schol. Def.* viii. For the water in the vessel, at that time wherein it is said to have the greatest relative circular motion, hath, I think, no motion at all: as is plain from the foregoing section.

CXV. For to denominate a body *moved*, it is requisite, first, that it change its distance or situation with regard to some other body; and, secondly, that the force or action occasioning that change be applied to it. If either of these be wanting, I do not think that agreeable to the sense of mankind, or the propriety of language, a body can be said to be in motion. I grant, indeed, that it is possible for us to think a body, which we see change its distance from some other, to be moved, though it have no force applied to it (in which sense there may be apparent motion); but then it is, because the force causing the change of distance is imagined by us to be applied or impressed on that body thought to move: which indeed shews we are capable of mistaking a thing to be in motion which is not, and that is all.

CXVI. From what hath been said, it follows that the philosophic consideration of motion doth not imply

the being of an *absolute space*, distinct from that which is perceived by sense, and related to bodies: which that it cannot exist without the mind, is clear upon the same principles, that demonstrate the like of all other objects of sense. And perhaps, if we inquire narrowly, we shall find we cannot even frame an idea or *pure space*, exclusive of all body. This I must confess seems impossible, as being a most abstract idea. When I excite a motion in some part of my body, if it be free or without resistance, I say there is *space:* but if I find a resistance, then I say there is *body:* and in proportion as the resistance to motion is lesser or greater, I say the *space* is more or less *pure*. So that when I speak of pure or empty space, it is not to be supposed that the word *space* stands for an idea distinct from, or conceivable without, body and motion. Though indeed we are apt to think every noun substantive stands for a distinct idea, that may be separated from all others: which hath occasioned infinite mistakes. When therefore supposing all the world to be annihilated besides my own body I say there still remains *pure space:* thereby nothing else is meant, but only that I conceive it possible, for the limbs of my body to be moved on all sides without the least resistance: but if that too were annihilated, then there could be no motion, and consequently no space. Some, perhaps, may think the sense of seeing doth furnish them with the idea of pure space; but it is plain from what we have elsewhere shewn, that the ideas of space and distance are not obtained by that sense. See the *Essay concerning Vision*.

CXVII. What is here laid down seems to put an end to all those disputes and difficulties, which have sprung up among the learned concerning the nature of *pure space*. But the chief advantage arising from it, is, that we are freed from that dangerous *dilemma*, to which several, who have employed their thoughts on this subject, imagine themselves reduced; to wit, of thinking

either that real space is God, or else that there is something beside God which is eternal, uncreated, infinite, indivisible, immutable: both which may justly be thought pernicious and absurd notions. It is certain that not a few divines, as well as philosophers of great note, have, from the difficulty they found in conceiving either limits or annihilation of space, concluded it must be *Divine*. And some of late have set themselves particularly to shew, that the incommunicable attributes of God agree to it. Which doctrine, how unworthy soever it may seem of the Divine nature, yet I do not see how we can get clear of it, so long as we adhere to the received opinions.

CXVIII. Hitherto of natural philosophy: we come now to make some inquiry concerning that other great branch of speculative knowledge; to wit, *mathematics*. These, how celebrated soever they may be for their clearness and certainty of demonstration, which is hardly any where else to be found, cannot nevertheless be supposed altogether free from mistakes; if in their principles there lurks some secret error, which is common to the professors of those sciences with the rest of mankind. Mathematicians, though they deduce their theorems from a great height of evidence, yet their first principles are limited by the consideration of quantity: and they do not ascend into any inquiry concerning those transcendental maxims, which influence all the particular sciences; each part whereof, mathematics not excepted, doth consequently participate of the errors involved in them. That the principles laid down by mathematicians are true, and their way of deduction from those principles clear and incontestable, we do not deny. But we hold, there may be certain erroneous maxims of greater extent than the object of mathematics, and for that reason not expressly mentioned, though tacitly supposed throughout the whole progress of that science; and that the ill effects of those secret unexamined errors are diffused through all

the branches thereof. To be plain, we suspect the mathematicians are, as well as other men, concerned in the errors arising from the doctrine of abstract general ideas, and the existence of objects without the mind.

CXIX. *Arithmetic* hath been thought to have for its object abstract ideas of *number*. Of which, to understand the properties and mutual habitudes is supposed no mean part of speculative knowledge. The opinion of the pure and intellectual nature of numbers in abstract, hath made them in esteem with those philosophers, who seem to have affected an uncommon fineness and elevation of thought. It hath set a price on the most trifling numerical speculations, which in practice are of no use, but serve only for amusement; and hath therefore so far infected the minds of some, that they have dreamt of mighty *mysteries* involved in numbers, and attempted the explication of natural things by them. But if we inquire into our own thoughts, and consider what hath been premised, we may perhaps entertain a low opinion of those high flights and abstractions, and look on all inquiries about numbers, only as so many *difficilis nugæ*, so far as they are not subservient to practice, and promote the benefit of life.

CXX. Unity in abstract we have before considered in sect. xiii, from which and what hath been said in the introduction, it plainly follows there is not any such idea. But number being defined a *collection of unites*, we may conclude that, if there be no such thing as unity or unit in abstract, there are no ideas of number in abstract denoted by the numeral names and figures. The theories thereof in arithmetic, if they are abstracted from the names and figures, as likewise from all use and practice, as well as from the particular things numbered, can be supposed to have nothing at all for their object. Hence we may see, how entirely the science of numbers is subordinate to practice, and how jejune and trifling it becomes, when considered as a matter of mere speculation.

CXXI. However, since there may be some, who, deluded by the specious show of discovering abstracted verities, waste their time in arithmetical theorems and problems, which have not any use: it will not be amiss, if we more fully consider, and expose the vanity of that pretence; and this will plainly appear, by taking a view of arithmetic in its infancy, and observing what it was that originally put men on the study of that science, and to what scope they directed it. It is natural to think that, at first, men, for ease of memory and help of computation, made use of counters, or in writing of single strokes, points or the like, each whereof was made to signify a unit; that is, some one thing of whatever kind they had occasion to reckon. Afterwards they found out the more compendious ways, of making one character stand in place of several strokes, or points. And lastly, the notation of the Arabians or Indians came into use; wherein, by the repetition of a few characters or figures, and varying the signification of each figure according to the place it obtains, all numbers may be most aptly expressed: which seems to have been done in imitation of language, so that an exact analogy is observed betwixt the notation by figures and names, the nine simple figures answering the nine first numeral names and places in the former, corresponding to denominations in the latter. And agreeably to those conditions of the simple and local value of figures, were contrived methods of finding from the given figures or marks of the parts, what figures and how placed, are proper to denote the whole, or *vice versa*. And having found the sought figures, the same rule or analogy being observed throughout, it is easy to read them into words; and so the number becomes perfectly known. For then the number of any particular things is said to be known, when we know the name or figures (with their due arrangement), that, according to the standing analogy, belong to them. For these signs being known, we can, by the operations of

arithmetic, know the signs of any part of the particular sums signified by them; and thus computing in signs (because of the connexion established betwixt them and the distinct multitudes of things, whereof one is taken for a unit), we may be able rightly to sum up, divide, and proportion the things themselves that we intend to number.

CXXII. In arithmetic, therefore, we regard not the *things* but the *signs*, which nevertheless are not regarded for their own sake, but because they direct us how to act with relation to things, and dispose rightly of them. Now agreeably to what we have before observed of words in general, (sect. xix. *Introd.*) it happens here, likewise, that abstract ideas are thought to be signified by numeral names or characters, while they do not suggest ideas of particular things to our minds. I shall not at present enter into a more particular dissertation on this subject; but only observe, that it is evident from what hath been said, those things which pass for abstract truths and theorems concerning numbers, are, in reality, conversant about no object distinct from particular numerable things, except only names and characters; which originally came to be considered, on no other account but their being *signs*, or capable to represent aptly, whatever particular things men had need to compute. Whence it follows, that to study them for their own sake would be just as wise, and to as good purpose, as if a man, neglecting the true use or original intention and subservieney of language, should spend his time in impertinent criticisms upon words, or reasonings and controversies purely verbal.

CXXIII. From numbers we proceed to speak of *extension*, which considered as relative, is the object of geometry. The *infinite* divisibility of *finite* extension, though it is not expressly laid down, either as an axiom or theorem in the elements of that science, yet is throughout the same every where supposed, and thought to

have so inseparable and essential a connexion with the principles and demonstrations in geometry, that mathematicians never admit it into doubt, or make the least question of it. And as this notion is the source from whence do spring all those amusing geometrical paradoxes, which have such a direct repugnancy to the plain common sense of mankind, and are admitted with so much reluctance into a mind not yet debauched by learning; so is it the principal occasion of all that nice and extreme subtilty, which renders the study of *mathematics* so difficult and tedious. Hence if we can make it appear, that no finite extension contains innumerable parts, or is infinitely divisible, it follows, that we shall at once clear the science of geometry from a great number of difficulties and contradictions, which have ever been esteemed a reproach to human reason, and withal make the attainment thereof a business of much less time and pains, than it hitherto hath been.

CXXIV. Every particular finite extension, which may possibly be the object of our thought, is an *idea* existing only in the mind, and consequently each part thereof must be perceived. If therefore I cannot perceive innumerable parts in any finite extension that I consider, it is certain they are not contained in it: but it is evident, that I cannot distinguish innumerable parts in any particular line, surface, or solid, which I either perceive by sense, or figure to myself in my mind: wherefore I conclude they are not contained in it. Nothing can be plainer to me, than that the extensions I have in view are no other than my own ideas, and it is no less plain, that I cannot resolve any one of my ideas into an infinite number of other ideas, that is, that they are not infinitely divisible. If by *finite extension* be meant something distinct from a finite idea, I declare I do not know what that is, and so cannot affirm or deny any thing of it. But if the terms *extension*, *parts*, and the like, are taken in any sense conceivable,

that is, for ideas; then to say a finite quantity or extension consists of parts infinite in number, is so manifest a contradiction, that every one at first sight acknowledges it to be so. And it is impossible it should ever gain the assent of any reasonable creature, who is not brought to it by gentle and slow degrees, as a converted gentile to the belief of *transubstantiation*. Ancient and rooted prejudices do often pass into principles: and those propositions which once obtain the force and credit of a *principle*, are not only themselves, but likewise whatever is deducible from them, thought privileged from all examination. And there is no absurdity so gross, which, by this means, the mind of man may not be prepared to swallow.

CXXV. He whose understanding is prepossessed with the doctrine of abstract general ideas, may be persuaded, that (whatever be thought of the ideas of sense) extension in *abstract* is infinitely divisible. And one who thinks the objects of sense exist without the mind, will perhaps in virtue thereof be brought to admit, that a line but an inch long may contain innumerable parts really existing, though too small to be discerned. These errors are grafted as well in the minds of *geometricians* as of other men, and have a like influence on their reasonings; and it were no difficult thing, to shew how the arguments from geometry, made use of to support the infinite divisibility of extension, are bottomed on them. At present we shall only observe in general, whence it is that the mathematicians are all so fond and tenacious of this doctrine.

CXXVI. It hath been observed in another place, that the theorems and demonstrations in geometry are conversant about universal ideas; (sect. xv. *Introd.*) where it is explained in what sense this ought to be understood; to wit, that the particular lines and figures included in the diagram, are supposed to stand for innu-

merable others of different sizes; or in other words, the geometer considers them abstracting from their magnitude: which doth not imply that he forms an abstract idea, but only that he cares not what the particular magnitude is, whether great or small, but looks on that as a thing indifferent to the demonstration: hence it follows, that a line in the scheme, but an inch long, must be spoken of, as though it contained ten thousand parts, since it is regarded not in itself, but as it is universal; and it is universal only in its signification, whereby it represents innumerable lines greater than itself, in which may be distinguished ten thousand parts or more, though there may not be above an inch in it. After this manner, the properties of the lines signified are (by a very usual figure) transferred to the sign, and thence, through mistake, thought to appertain to it considered in its own nature.

CXXVII. Because there is no number of parts so great, but it is possible there may be a line containing more, the inch-line is said to contain parts more than any assignable number; which is true, not of the inch taken absolutely, but only for the things signified by it. But men not retaining that distinction in their thoughts, slide into a belief that the small particular line described on paper contains in itself parts innumerable. There is no such thing as the ten-thousandth part of an *inch*; but there is of a *mile* or *diameter of the earth*, which may be signified by that inch. When therefore I delineate a triangle on paper, and take one side not above an inch, for example, in length, to be the *radius*: this I consider as divided into ten thousand, or a hundred thousand parts, or more. For though the ten-thousandth part of that line considered in itself is nothing at all, and consequently may be neglected without any error or inconveniency; yet these described lines being only marks standing for greater quantities, whereof it

may be the ten-thousandth part is very considerable, it follows, that to prevent notable errors in practice, the *radius* must be taken of ten thousand parts, or more.

CXXVIII. From what hath been said, the reason is plain, why, to the end any theorem may become universal in its use, it is necessary we speak of the lines described on paper, as though they contained parts which really they do not. In doing of which, if we examine the matter thoroughly, we shall perhaps discover that we cannot conceive an inch itself as consisting of, or being divisible into, a thousand parts, but only some other line which is far greater than an inch, and represented by it. And that when we say a line is *infinitely divisible*, we must mean a line which is *infinitely great*. What we have here observed seems to be the chief cause, why to suppose the infinite divisibility of finite extension hath been thought necessary in geometry.

CXXIX. The several absurdities and contradictions which flowed from this false principle might, one would think, have been esteemed so many demonstrations against it. But, by I know not what *logic*, it is held, that proofs *à posteriori* are not to be admitted against propositions relating to infinity. As though it were not impossible even for an infinite mind to reconcile contradictions: or as if any thing absurd and repugnant could have a necessary connexion with truth, or flow from it. But whoever considers the weakness of this pretence, will think it was contrived on purpose to humour the laziness of the mind, which had rather acquiesce in an indolent scepticism, than be at the pains to go through with a severe examination of those principles it hath ever embraced for true.

CXXX. Of late the speculations about infinites have run so high, and grown to such strange notions, as have occasioned no small scruples and disputes among the geometers of the present age. Some there are of

great note, who, not content with holding that finite lines may be divided into an infinite number of parts, do yet farther maintain, that each of those infinitesimals is itself subdivisible into an infinity of other parts, or infinitesimals of a second order, and so on *ad infinitum*. These, I say, assert there are infinitesimals of infinitesimals of infinitesimals, without ever coming to an end. So that, according to them, an inch doth not barely contain an infinite number of parts, but an infinity of an infinity of an infinity, *ad infinitum*, of parts. Others there be who hold all orders of infinitesimals below the first to be nothing at all, thinking it with good reason absurd, to imagine there is any positive quantity or part of extension, which, though multiplied infinitely, can ever equal the smallest given extension. And yet on the other hand it seems no less absurd, to think the square, cube, or other power, of a positive real root, should itself be nothing at all; which they who hold infinitesimals of the first order, denying all of the subsequent orders, are obliged to maintain.

CXXXI. Have we not therefore reason to conclude, that they are *both* in the wrong, and that there is in effect no such thing as parts infinitely small, or an infinite number of parts contained in any finite quantity? But you will say, that if this doctrine obtains, it will follow the very foundations of geometry are destroyed: and those great men who have raised that science to so astonishing a height, have been all the while building a castle in the air. To this it may be replied, that whatever is useful in geometry, and promotes the benefit of human life, doth still remain firm and unshaken on our principles. That science, considered as practical, will rather receive advantage than any prejudice from what hath been said. But to set this in a due light, may be the subject of a distinct inquiry. For the rest, though it should follow that some of the more intricate and subtile parts of *speculative mathematics* may be pared off

without any prejudice to truth; yet I do not see what damage will be thence derived to mankind. On the contrary, it were highly to be wished, that men of great abilities and obstinate application, would draw off their thoughts from those amusements, and employ them in the study of such things as lie nearer the concerns of life, or have a more direct influence on the manners.

CXXXII. If it be said that several theorems undoubtedly true, are discovered by methods in which infinitesimals are made use of, which could never have been, if their existence included a contradiction in it; I answer, that upon a thorough examination it will not be found, that in any instance it is necessary to make use of or conceive infinitesimal parts of finite lines, or even quantities less than the *minimum sensible:* nay, it will be evident this is never done, it being impossible.

CXXXIII. By what we have premised, it is plain that very numerous and important errors have taken their rise from those false principles, which were impugned in the foregoing parts of this treatise. And the opposites of those erroneous tenets at the same time appear to be most fruitful principles, from whence do flow innumerable consequences highly advantageous to true philosophy as well as to religion. Particularly *matter*, or *the absolute existence of corporeal objects*, hath been shewn to be that wherein the most avowed and pernicious enemies of all knowledge, whether human or divine, have ever placed their chief strength and confidence. And surely, if by distinguishing the real existence of unthinking things from their being perceived, and allowing them a subsistence of their own out of the minds of spirits, no one thing is explained in nature; but on the contrary a great many inexplicable difficulties arise: if the supposition of matter is barely precarious, as not being grounded on so much as one single reason: if its consequences cannot endure the light of examination and free inquiry, but screen themselves under

the dark and general pretence of *infinities being incomprehensible:* if withal the removal of this *matter* be not attended with the least evil consequence, if it be not even missed in the world, but every thing as well, nay much easier conceived without it: if, lastly, both sceptics and atheists are for ever silenced upon supposing only spirits and ideas, and this scheme of things is perfectly agreeable both to *reason* and *religion:* methinks we may expect it should be admitted and firmly embraced, though it were proposed only as an hypothesis, and the existence of matter had been allowed possible, which yet I think we have evidently demonstrated that it is not.

CXXXIV. True it is, that, in consequence of the foregoing principles, several disputes and speculations, which are esteemed no mean parts of learning, are rejected as useless. But how great a prejudice soever against our notions, this may give to those who have already been deeply engaged, and made large advances in studies of that nature: yet, by others, we hope it will not be thought any just ground of dislike to the principles and tenets herein laid down, that they abridge the labour of study, and make human sciences more clear, compendious, and attainable, than they were before.

CXXXV. Having dispatched what we intended to say concerning the knowledge of *ideas*, the method we proposed, leads us in the next place to treat of *spirits:* with regard to which, perhaps human knowledge is not so deficient as is vulgarly imagined. The great reason that is assigned for our being thought ignorant of the nature of spirits, is our not having an idea of it. But surely it ought not to be looked on as a defect in a human understanding, that it does not perceive the idea of *spirit*, if it is manifestly impossible there should be any such *idea*. And this, if I mistake not, has been demonstrated in sect. xxvii. to which I shall here add, that a spirit has been shewn to be the only substance or sup-

port, wherein the unthinking beings or ideas can exist: but that this *substance* which supports or perceives ideas should itself be an *idea*, or like an *idea*, is evidently absurd.

CXXXVI. It will perhaps be said, that we want a sense (as some have imagined) proper to know substances withal, which if we had, we might know our own soul, as we do a triangle. To this I answer, that in case we had a new sense bestowed upon us, we could only receive thereby some new sensations or ideas of sense. But I believe nobody will say, that what he means by the terms *soul* and *substance*, is only some particular sort of idea or sensation. We may therefore infer, that, all things duly considered, it is not more reasonable to think our faculties defective, in that they do not furnish us with an idea of spirit or active thinking substance, than it would be if we should blame them for not being able to comprehend a *round square*.

CXXXVII. From the opinion that spirits are to be known after the manner of an idea or sensation, have risen many absurd and heterodox tenets, and much scepticism about the nature of the soul. It is even probable, that this opinion may have produced a doubt in some whether they had any soul at all distinct from their body, since upon inquiry they could not find they had an idea of it. That an *idea* which is inactive, and the existence whereof consists in being perceived, should be the image or likeness of an agent subsisting by itself, seems to need no other refutation, than barely attending to what is meant by those words. But perhaps you will say, that though an *idea* cannot resemble a *spirit* in its thinking, acting, or subsisting by itself, yet it may in some other respects: and it is not necessary that an idea or image be in all respects like the original.

CXXXVIII. I answer, if it does not in those mentioned, it is impossible it should represent it in any other thing. Do but leave out the power of willing, thinking, and perceiving ideas, and there remains nothing

else wherein the idea can be like a spirit. For by the word *spirit* we mean only that which thinks, wills, and perceives; this, and this alone, constitutes the signification of that term. If therefore it is impossible that any degree of those powers should be represented in an idea, it is evident there can be no idea of a spirit.

CXXXIX. But it will be objected, that if there is no idea signified by the terms *soul, spirit,* and *substance,* they are wholly insignificant, or have no meaning in them. I answer, those words do mean or signify a real thing, which is neither an idea or like an idea, but that which perceives ideas, and wills and reasons about them. What I am myself, that which I denote by the term I, is the same with what is meant by *soul* or *spiritual substance.* If it be said that this is only quarrelling at a word, and that since the immediate significations of other names are by common consent called *ideas,* no reason can be assigned, why that which is signified by the name *spirit* or *soul* may not partake in the same appellation: I answer, all the unthinking objects of the mind agree in that they are entirely passive, and their existence consists only in being perceived: whereas a soul or spirit is an active being, whose existence consists not in being perceived, but in perceiving ideas and thinking. It is therefore necessary, in order to prevent equivocation and confounding natures perfectly disagreeing and unlike, that we distinguish between *spirit* and *idea.* See sect. xxvii.

CXL. In a large sense, indeed, we may be said to have an idea, or rather a notion, of *spirit*; that is, we understand the meaning of the word, otherwise we could not affirm or deny any thing of it. Moreover, as we conceive the ideas that are in the minds of other spirits by means of our own, which we suppose to be resemblances of them: so we know other spirits by means of our own soul, which in that sense is the image or idea of them, it having a like respect to other spirits,

that blueness or heat by me perceived hath to those ideas perceived by another.

CXLI. It must not be supposed, that they who assert the natural immortality of the soul are of opinion that it is absolutely incapable of annihilation even by the infinite power of the Creator who first gave it being: but only that it is not liable to be broken or dissolved by the ordinary laws of nature or motion. They, indeed, who hold the soul of a man to be only a thin vital flame, or system of animal spirits, make it perishing and corruptible as the body, since there is nothing more easily dissipated than such a being, which it is naturally impossible should survive the ruin of the tabernacle, wherein it is enclosed. And this notion hath been greedily embraced and cherished by the worst part of mankind, as the most effectual antidote against all impressions of virtue and religion. But it hath been made evident, that bodies of what frame or texture soever, are barely passive ideas in the mind, which is more distant and heterogeneous from them, than light is from darkness. We have shewn that the soul is indivisible, incorporeal, unextended, and it is consequently incorruptible. Nothing can be plainer, than that the motions, changes, decays, and dissolutions which we hourly see befal natural bodies (and which is what we mean by the *course of nature*) cannot possibly affect an active, simple, uncompounded substance: such a being therefore is indissoluble by the force of nature, that is to say, *the soul of man is naturally immortal.*

CXLII. After what hath been said, it is I suppose plain, that our souls are not to be known in the same manner as senseless, inactive objects, or by way of *idea*. *Spirits* and *ideas* are things so wholly different, that when we say *they exist*, *they are known*, or the like, these words must not be thought to signify any thing common to both natures. There is nothing alike or common in them: and to expect that by any multiplication or en-

largement of our faculties, we may be enabled to know a spirit as we do a triangle, seems as absurd as if we should hope to *see a sound*. This is inculcated because I imagine it may be of moment towards clearing several important questions, and preventing some very dangerous errors concerning the nature of the soul. We may not I think strictly be said to have an idea of an active being, or of an action, although we may be said to have a notion of them. I have some knowledge or notion of my mind, and its acts about ideas, inasmuch as I know or understand what is meant by those words. What I know, that I have some notion of. I will not say that the terms *idea* and *notion* may not be used convertibly, if the world will have it so. But yet it conduceth to clearness and propriety, that we distinguish things very different by different names. It is also to be remarked, that all relations including an act of the mind, we cannot so properly be said to have an idea, but rather a notion of the relations or habitudes between things. But if in the modern way the word *idea* is extended to spirits, and relations and acts; this is after all an affair of verbal concern.

CXLIII. It will not be amiss to add, that the doctrine of *abstract ideas* hath had no small share in rendering those sciences intricate and obscure, which are particularly conversant about spiritual things. Men have imagined they could frame abstract notions of the powers and acts of the mind, and consider them prescinded, as well from the mind or spirit itself, as from their respective objects and effects. Hence a great number of dark and ambiguous terms presumed to stand for abstract notions, have been introduced into metaphysics and morality, and from these have grown infinite distractions and disputes amongst the learned.

CXLIV. But nothing seems more to have contributed towards engaging men in controversies and mistakes, with regard to the nature and operations of the

mind, than the being used to speak of those things in terms borrowed from sensible ideas. For example, the will is termed the *motion* of the soul: this infuses a belief, that the mind of man is as a ball in motion, impelled and determined by the objects of sense, as necessarily as that is by the stroke of a racket. Hence arise endless scruples and errors of dangerous consequence in morality. All which I doubt not may be cleared, and truth appear plain, uniform, and consistent, could but philosophers be prevailed on to retire into themselves, and attentively consider their own meaning.

CXLV. From what hath been said, it is plain that we cannot know the existence of other spirits, otherwise than by their operations, or the ideas by them excited in us. I perceive several motions, changes, and combinations of ideas, that inform me there are certain particular agents like myself, which accompany them, and concur in their production. Hence the knowledge I have of other spirits is not immediate, as is the knowledge of my ideas; but depending on the intervention of ideas, by me referred to agents or spirits distinct from myself, as effects or concomitant signs.

CXLVI. But though there be some things which convince us, human agents are concerned in producing them; yet it is evident to every one, that those things which are called the works of nature, that is, the far greater part of the ideas or sensations perceived by us, are not produced by, nor dependent on the wills of men. There is therefore some other Spirit that causes them, since it is repugnant that they should subsist by themselves. See sect. xxix. But if we attentively consider the constant regularity, order, and concatenation of natural things, the surprising magnificence, beauty, and perfection of the larger, and the exquisite contrivance of the smaller parts of the creation, together with the exact harmony and correspondence of the whole, but above all, the never enough admired laws of pain and pleasure, and the

instincts or natural inclinations, appetites, and passions of animals; I say if we consider all these things, and at the same time attend to the meaning and import of the attributes, one, eternal, infinitely wise, good, and perfect, we shall clearly perceive that they belong to the aforesaid Spirit, *who works all in all*, and *by whom all things consist.*

CXLVII. Hence it is evident, that God is known as certainly and immediately as any other mind or spirit whatsoever, distinct from ourselves. We may even assert, that the existence of God is far more evidently perceived than the existence of men; because the effects of nature are infinitely more numerous and considerable, than those ascribed to human agents. There is not any one mark that denotes a man, or effect produced by him, which doth not more strongly evince the being of that Spirit who is the *author of nature*. For it is evident that in affecting other persons, the will of man hath no other object, than barely the motion of the limbs of his body; but that such a motion should be attended by, or excite any idea in the mind of another, depends wholly on the will of the Creator. He alone it is who "upholding all things by the word of his power," maintains that intercourse between spirits, whereby they are able to perceive the existence of each other. And yet this pure and clear light which enlightens every one, is itself invisible.

CXLVIII. It seems to be a general pretence of the unthinking herd, that they cannot see God. Could we but see him, say they, as we see a man, we should believe that he is, and believing obey his commands. But alas, we need only open our eyes to see the sovereign Lord of all things with a more full and clear view, than we do any one of our fellow-creatures. Not that I imagine we see God (as some will have it) by a direct and immediate view, or see corporeal things, not by themselves, but by seeing that which represents them in the essence of God, which doctrine is I must confess to me incompre-

hensible. But I shall explain my meaning. A human spirit or person is not perceived by sense, as not being an idea; when therefore we see the colour, size, figure, and motions of a man, we perceive only certain sensations or ideas excited in our own minds: and these being exhibited to our view in sundry distinct collections, serve to mark out unto us the existence of finite and created spirits like ourselves. Hence it is plain, we do not see a man, if by *man* is meant that which lives, moves, perceives and thinks as we do: but only such a certain collection of ideas, as directs us to think there is a distinct principle of thought and motion like to ourselves, accompanying and represented by it. And after the same manner we see God; all the difference is, that whereas some one finite and narrow assemblage of ideas denotes a particular human mind, whithersoever we direct our view, we do at all times and in all places perceive manifest tokens of the Divinity: every thing we see, hear, feel, or anywise perceive by sense, being a sign or effect of the power of God; as is our perception of those very motions, which are produced by men.

CXLIX. It is therefore plain, that nothing can be more evident to any one that is capable of the least reflection, than the existence of God, or a spirit who is intimately present to our minds, producing in them all that variety of ideas or sensations, which continually affect us, on whom we have an absolute and entire dependance, in short, "in whom we live, and move, and have our being." That the discovery of this great truth which lies so near and obvious to the mind, should be attained to by the reason of so very few, is a sad instance of the stupidity and inattention of men, who, though they are surrounded with such clear manifestations of the Deity, are yet so little affected by them, that they seem as it were blinded with excess of light.

CL. But you will say, hath nature no share in the production of natural things, and must they be all ascribed

to the immediate and sole operation of God; I answer, if by *nature* is meant only the visible *series* of effects, or sensations imprinted on our minds according to certain fixed and general laws: then it is plain, that nature taken in this sense cannot produce any thing at all. But if by *nature* is meant some being distinct from God, as well as from the laws of nature and things perceived by sense, I must confess that word is to me an empty sound, without any intelligible meaning annexed to it. Nature in this acceptation is a vain chimera introduced by those heathens, who had not just notions of the omnipresence and infinite perfection of God. But it is more unaccountable, that it should be received among Christians professing belief in the holy Scriptures, which constantly ascribe those effects to the immediate hand of God, that heathen philosophers are wont to impute to *nature*. The Lord, "he causeth the vapours to ascend; he maketh lightnings with rain; he bringeth forth the wind out of his treasures." Jer. x. 13. "He turneth the shadow of death into the morning, and maketh the day dark with night." Amos v. 8. "He visiteth the earth, and maketh it soft with showers: he blesseth the springing thereof, and crowneth the year with his goodness; so that the pastures are clothed with flocks, and the valleys are covered over with corn." See Psalm lxv. But notwithstanding that this is the constant language of Scripture; yet we have I know not what aversion from believing, that God concerns himself so nearly in our affairs. Fain would we suppose him at a great distance off, and substitute some blind unthinking deputy in his stead, though (if we may believe St. Paul) "he be not far from every one of us."

CLI. It will I doubt not be objected, that the slow and gradual methods observed in the production of natural things, do not seem to have for their cause the immediate hand of an *almighty Agent*. Besides, monsters, untimely births, fruits blasted in the blossom, rains fall-

ing in desert places, miseries incident to human life, are so many arguments that the whole frame of nature is not immediately actuated and superintended by a Spirit of infinite wisdom and goodness. But the answer to this objection is in a good measure plain from sect. lxii, it being visible, that the aforesaid methods of nature are absolute necessary, in order to working by the most simple and general rules, and after a steady and consistent manner; which argues both the *wisdom* and *goodness* of God. Such is the artificial contrivance of this mighty machine of nature, that whilst its motions and various phenomena strike on our senses, the hand which actuates the whole is itself unperceivable to men of flesh and blood. "Verily (saith the prophet) thou art a God that hidest thyself." Isaiah xlv. 15. But though God conceal himself from the eyes of the *sensual* and *lazy*, who will not be at the least expense of thought; yet to an unbiassed and attentive mind, nothing can be more plainly legible, than the intimate presence of an *all-wise Spirit*, who fashions, regulates, and sustains the whole system of being. It is clear from what we have elsewhere observed, that the operating according to general and stated laws, is so necessary for our guidance in the affairs of life, and letting us into the secret of nature, that without it, all reach and compass of thought, all human sagacity and design could serve to no manner of purpose: it were even impossible there should be any such faculties or powers in the mind. See sect. xxxi. Which one consideration abundantly outbalances whatever particular inconveniences may thence arise.

CLII. We should further consider, that the very blemishes and defects of nature are not without their use, in that they make an agreeable sort of variety, and augment the beauty of the rest of the creation, as shades in a picture serve to set off the brighter and more enlightened parts. We would likewise do well to examine, whether our taxing the waste of seeds and embryos, and

accidental destruction of plants and animals, before they come to full maturity, as an imprudence in the Author of nature, be not the effect of prejudice contracted by our familiarity with impotent and saving mortals. In *man* indeed a thrifty management of those things, which he cannot procure without much pains and industry, may be esteemed *wisdom*. But we must not imagine, that the inexplicably fine machine of an animal or vegetable, costs the great Creator any more pains or trouble in its production than a pebble doth: nothing being more evident, than that an omnipotent Spirit can indifferently produce every thing by a mere *fiat* or act of his will. Hence it is plain, that the splendid profusion of natural things should not be interpreted weakness or prodigality in the agent who produces them, but rather be looked on as an argument of the riches of his power.

CLIII. As for the mixture of pain or uneasiness which is in the world, pursuant to the general laws of nature, and the actions of finite imperfect spirits: this, in the state we are in at present, is indispensibly necessary to our well-being. But our prospects are too narrow: we take, for instance, the idea of some one particular pain into our thoughts, and account it *evil*; whereas if we enlarge our view, so as to comprehend the various ends, connexions, and dependences of things, on what occasions and in what proportions we are affected with pain and pleasure, the nature of human freedom, and the design with which we are put into the world; we shall be forced to acknowledge that those particular things, which considered in themselves appear to be *evil*, have the nature of *good*, when considered as linked with the whole system of beings.

CLIV. From what hath been said it will be manifest to any considering person, that it is merely for want of attention and comprehensiveness of mind, that there are any favourers of Atheism or the Manichean heresy to be found. Little and unreflecting souls may indeed bur-

lesque the works of Providence, the beauty and order whereof they have not capacity, or will not be at the pains to comprehend. But those who are masters of any justness and extent of thought, and are withal used to reflect, can never sufficiently admire the Divine traces of wisdom and goodness that shine throughout the economy of nature. But what truth is there which shineth so strongly on the mind, that by an aversion of thought, a wilful shutting of the eyes, we may not escape seeing it? Is it therefore to be wondered at, if the generality of men, who are ever intent on business or pleasure, and little used to fix or open the eye of their mind, should not have all that conviction and evidence of the being of God, which might be expected in reasonable creatures?

CLV. We should rather wonder, that men can be found so stupid as to neglect, than that neglecting they should be unconvinced of such an evident and momentous truth. And yet it is to be feared that too many of parts and leisure, who live in Christian countries, are merely through a supine and dreadful negligence sunk into a sort of Atheism. Since it is downright impossible, that a soul pierced and enlightened with a thorough sense of the omnipresence, holiness, and justice of that *almighty Spirit*, should persist in a remorseless violation of his laws. We ought therefore earnestly to meditate and dwell on those important points; that so we may attain conviction without all scruple, "that the eyes of the Lord are in every place beholding the evil and the good;—that he is with us and keepeth us in all places whither we go, and giveth us bread to eat, and raiment to put on;" that he is present and conscious to our innermost thoughts: and that we have a most absolute and immediate dependance on him. A clear view of which great truths cannot choose but fill our hearts with an awful circumspection and holy fear, which is the strongest incentive to *virtue*, and the best guard against *vice*.

CLVI. For after all, what deserves the first place in

our studies, is the consideration of God, and our *duty*; which to promote, as it was the main drift and design of my labours, so shall I esteem them altogether useless and ineffectual, if by what I have said I cannot inspire my readers with a pious sense of the presence of God: and having shewn the falseness or vanity of those barren speculations, which make the chief employment of learned men, the better dispose them to reverence and embrace the salutary truths of the gospel, which to know and to practise is the highest perfection of human nature.

THREE DIALOGUES

BETWEEN

HYLAS AND PHILONOUS.

IN OPPOSITION TO

SCEPTICS AND ATHEISTS.

THE

FIRST DIALOGUE.

PHILONOUS.

GOOD morrow, Hylas: I did not expect to find you abroad so early.

Hylas. It is indeed something unusual; but my thoughts were so taken up with a subject I was discoursing of last night, that finding I could not sleep, I resolved to rise and take a turn in the garden.

Phil. It happened well, to let you see what innocent and agreeable pleasures you lose every morning. Can there be a pleasanter time of the day, or a more delightful season of the year? That purple sky, those wild but sweet notes of birds, the fragrant bloom upon the trees and flowers, the gentle influence of the rising sun, these and a thousand nameless beauties of nature inspire the soul with secret transports; its faculties too being at this time fresh and lively, are fit for these meditations, which the solitude of a garden and tranquillity of the morning naturally dispose us to. But I am afraid I interrupt your thoughts: for you seemed very intent on something.

Hyl. It is true, I was, and shall be obliged to you if you will permit me to go on in the same vein; not that I would by any means deprive myself of your company, for my thoughts always flow more easily in conversation with a friend, than when I am alone: but my request is, that you would suffer me to impart my reflections to you.

Phil. With all my heart, it is what I should have requested myself if you had not prevented me.

Hyl. I was considering the odd fate of those men who have in all ages, through an affectation of being distinguished from the vulgar, or some unaccountable turn of thought, pretended either to believe nothing at all, or to believe the most extravagant things in the world. This however might be borne, if their paradoxes and scepticism did not draw after them some consequences of general disadvantage to mankind. But the mischief lieth here; that when men of less leisure see them who are supposed to have spent their whole time in the pursuits of knowledge, professing an entire ignorance of all things, or advancing such notions as are repugnant to plain and commonly received principles, they will be tempted to entertain suspicions concerning the most important truths, which they had hitherto held sacred and unquestionable.

Phil. I entirely agree with you, as to the ill tendency of the affected doubts of some philosophers, and fantastical conceits of others. I am even so far gone of late in this way of thinking, that I have quitted several of the sublime notions I had got in their schools for vulgar opinions. And I give it you on my word, since this revolt from metaphysical notions, to the plain dictates of nature and common sense, I find my understanding strangely enlightened, so that I can now easily comprehend a great many things which before were all mystery and riddle.

Hyl. I am glad to find there was nothing in the accounts I heard of you.

Phil. Pray, what were those?

Hyl. You were represented in last night's conversation, as one who maintained the most extravagant opinion that ever entered into the mind of man, to wit, that there is no such thing as *material substance* in the world.

Phil. That there is no such thing as what philoso-

phers call *material substance*, I am seriously persuaded: but if I were made to see any thing absurd or sceptical in this, I should then have the same reason to renounce this, that I imagine I have now to reject the contrary opinion.

Hyl. What! can any thing be more fantastical, more repugnant to common sense, or a more manifest piece of scepticism, than to believe there is no such thing as *matter*?

Phil. Softly good Hylas. What if it should prove, that you, who hold there is, are by virtue of that opinion a greater sceptic, and maintain more paradoxes and repugnances to common sense, than I who believe no such thing?

Hyl. You may as soon persuade me, the part is greater than the whole, as that in order to avoid absurdity and scepticism, I should ever be obliged to give up my opinion in this point.

Phil. Well then, are you content to admit that opinion for true, which upon examination shall appear most agreeable to common sense, and remote from scepticism?

Hyl. With all my heart. Since you are for raising disputes about the plainest things in nature, I am content for once to hear what you have to say.

Phil. Pray, Hylas, what do you mean by a *sceptic*?

Hyl. I mean what all men mean, one that doubts of every thing.

Phil. He then who entertains no doubt concerning some particular point, with regard to that point cannot be thought a sceptic.

Hyl. I agree with you.

Phil. Whether doth doubting consist in embracing the affirmative or negative side of a question?

Hyl. In neither; for whoever understands English, cannot but know that *doubting* signifies a suspense between both.

Phil. He then that denieth any point, can no more be said to doubt of it, than he who affirmeth it with the same degree of assurance.

Hyl. True.

Phil. And consequently, for such his denial is no more to be esteemed a sceptic than the other.

Hyl. I acknowledge it.

Phil. How cometh it to pass then, Hylas, that you pronounce me a *sceptic*, because I deny what you affirm, to wit, the existence of matter? Since, for ought you can tell, I am as peremptory in my denial, as you in your affirmation.

Hyl. Hold, Philonous, I have been a little out in my definition; but every false step a man makes in discourse is not to be insisted on. I said indeed that a *sceptic* was one who doubted of every thing; but I should have added, or who denies the reality and truth of things.

Phil. What things? Do you mean the principles and theorems of sciences? but these you know are universal intellectual notions, and consequently independent of matter; the denial therefore of this doth not imply the denying them.

Hyl. I grant it. But are there no other things? What think you of distrusting the senses, of denying the real existence of sensible things, or pretending to know nothing of them. Is not this sufficient to denominate a man a *sceptic!*

Phil. Shall we therefore examine which of us it is that denies the reality of sensible things, or professes the greatest ignorance of them; since, if I take you rightly, he is to be esteemed the greatest *sceptic?*

Hyl. That is what I desire.

Phil. What mean you by sensible things?

Hyl. Those things which are perceived by the senses. Can you imagine that I mean any thing else?

Phil. Pardon me, Hylas, if I am desirous clearly to

apprehend your notions, since this may much shorten our inquiry. Suffer me then to ask you this farther question. Are those things only perceived by the senses which are perceived immediately? or may those things properly be said to be *sensible*, which are perceived mediately, or not without the intervention of others?

Hyl. I do not sufficiently understand you.

Phil. In reading a book, what I immediately perceive are the letters, but mediately, or by means of these, are suggested to my mind the notions of God, virtue, truth, &c. Now, that the letters are truly sensible things, or perceived by sense, there is no doubt: but I would know whether you take the things suggested by them to be so too.

Hyl. No, certainly; it were absurd to think *God* or *virtue* sensible things, though they may be signified and suggested to the mind by sensible marks, with which they have an arbitrary connexion.

Phil. It seems then, that by *sensible things* you mean those only which can be perceived immediately by sense?

Hyl. Right.

Phil. Doth it not follow from this, that though I see one part of the sky red, and another blue, and that my reason doth thence evidently conclude there must be some cause of that diversity of colours, yet that cause cannot be said to be a sensible thing, or perceived by the sense of seeing?

Hyl. It doth.

Phil. In like manner, though I hear variety of sounds, yet I cannot be said to hear the causes of those sounds?

Hyl. You cannot.

Phil. And when by my touch I perceive a thing to be hot and heavy, I cannot say with any truth or propriety, that I feel the cause of its heat or weight.

Hyl. To prevent any more questions of this kind, I tell you once for all, that by *sensible things* I mean those only which are perceived by sense, and that in truth the senses perceive nothing which they do not perceive immediately: for they make no inferences. The deducing therefore of causes or occasions from effects and appearances which alone are perceived by sense, entirely relates to reason.

Phil. This point then is agreed between us, that *sensible things are those only which are immediately perceived by sense.* You will farther inform me, whether we immediately perceive by sight any thing beside light, and colours, and figures: or by hearing, any thing but sounds: by the palate, any thing beside tastes: by the smell, beside odours; or by the touch, more than tangible qualities.

Hyl. We do not.

Phil. It seems therefore, that if you take away all sensible qualities, there remains nothing sensible?

Hyl. I grant it.

Phil. Sensible things therefore are nothing else but so many sensible qualities, or combinations of sensible qualities?

Hyl. Nothing else.

Phil. Heat then is a sensible thing?

Hyl. Certainly.

Phil. Doth the reality of sensible things consist in being perceived? or, is it something distinct from their being perceived, and that bears no relation to the mind?

Hyl. To *exist* is one thing, and to be *perceived* is another.

Phil. I speak with regard to sensible things only: and of these I ask, whether by their real existence you mean a subsistence exterior to the mind, and distinct from their being perceived?

Hyl. I mean a real absolute being, distinct from, and without any relation to their being perceived.

Phil. Heat therefore, if it be allowed a real being, must exist without the mind?

Hyl. It must.

Phil. Tell me, Hylas, is this real existence equally compatible to all degrees of heat, which we perceive: or is there any reason why we should attribute it to some, and deny it others? and if there be, pray let me know that reason.

Hyl. Whatever degree of heat we perceive by sense, we may be sure the same exists in the object that occasions it.

Phil. What! the greatest as well as the least?

Hyl. I tell you, the reason is plainly the same in respect of both: they are both perceived by sense; nay, the greater degree of heat is more sensibly perceived; and consequently, if there is any difference, we are more certain of its real existence than we can be of the reality of a lesser degree.

Phil. But is not the most vehement and intense degree of heat a very great pain.

Hyl. No one can deny it.

Phil. And is any unperceiving thing capable of pain or pleasure?

Hyl. No certainly.

Phil. Is your material substance a senseless being, or a being endowed with sense and perception?

Hyl. It is senseless, without doubt.

Phil. It cannot therefore be the subject of pain?

Hyl. By no means.

Phil. Nor consequently of the greatest heat perceived by sense, since you acknowledge this to be no small pain.

Hyl. I grant it.

Phil. What shall we say then of your external object; is it a material substance, or no?

Hyl. It is a material substance with the sensible qualities inhering in it.

Phil. How then can a great heat exist in it, since you own it cannot in a material substance? I desire you would clear this point.

Hyl. Hold, Philonous, I fear I was out in yielding intense heat to be a pain. It should seem rather, that pain is something distinct from heat, and the consequence or effect of it.

Phil. Upon putting your hand near the fire, do you perceive one simple uniform sensation, or two distinct sensations?

Hyl. But one simple sensation.

Phil. Is not the heat immediately perceived?

Hyl. It is.

Phil. And the pain?

Hyl. True.

Phil. Seeing therefore they are both immediately perceived at the same time, and the fire affects you only with one simple, or uncompounded idea, it follows that this same simple idea is both the intense heat immediately perceived, and the pain; and consequently, that the intense heat immediately perceived, is nothing distinct from a particular sort of pain.

Hyl. It seems so.

Phil. Again, try in your thoughts, Hylas, if you can conceive a vehement sensation to be without pain or pleasure.

Hyl. I cannot.

Phil. Or can you frame to yourself an idea of sensible pain or pleasure, in general, abstracted from every particular idea of heat, cold, tastes, smells? &c.

Hyl. I do not find that I can.

Phil. Doth it not therefore follow, that sensible pain is nothing distinct from those sensations or ideas, in an intense degree?

Hyl. It is undeniable; and to speak the truth, I begin to suspect a very great heat cannot exist but in a mind perceiving it.

Phil. What! are you then in that *sceptical* state of suspense, between affirming and denying?

Hyl. I think I may be positive in the point. A very violent and painful heat cannot exist without the mind.

Phil. It hath not therefore, according to you, any real being.

Hyl. I own it.

Phil. Is it therefore certain, that there is no body in nature really hot?

Hyl. I have not denied there is any real heat in bodies. I only say, there is no such thing as an intense real heat.

Phil. But did you not say before, that all degrees of heat were equally real: or if there was any difference, that the greater were more undoubtedly real than the lesser?

Hyl. True: but it was, because I did not then consider the ground there is for distinguishing between them, which I now plainly see. And it is this: because intense heat is nothing else but a particular kind of painful sensation; and pain cannot exist but in a perceiving being; it follows that no intense heat can really exist in an unperceiving corporeal substance. But this is no reason why we should deny heat in an inferior degree to exist in such a substance.

Phil. But how shall we be able to discern those degrees of heat which exist only in the mind, from those which exist without it?

Hyl. That is no difficult matter. You know, the least pain cannot exist unperceived; whatever, therefore, degree of heat is a pain, exists only in the mind. But as for all other degrees of heat, nothing obliges us to think the same of them.

Phil. I think you granted before, that no unperceiving being was capable of pleasure, any more than of pain.

Hyl. I did.

Phil. And is not warmth, or a more gentle degree of heat than what causes uneasiness, a pleasure?

Hyl. What then?

Phil. Consequently it cannot exist without the mind in any unperceiving substance, or body.

Hyl. So it seems.

Phil. Since therefore, as well those degrees of heat that are not painful, as those that are, can exist only in a thinking substance; may we not conclude that external bodies are absolutely incapable of any degree of heat whatsoever?

Hyl. On second thoughts, I do not think it so evident that warmth is a pleasure, as that a great degree of heat is a pain.

Phil. I do not pretend that warmth is as great a pleasure as heat is a pain. But if you grant it to be even a small pleasure, it serves to make good my conclusion.

Hyl. I could rather call it an *indolence.* It seems to be nothing more than a privation of both pain and pleasure. And that such a quality or state as this may agree to an unthinking substance, I hope you will not deny.

Phil. If you are resolved to maintain that warmth, or a gentle degree of heat, is no pleasure, I know not how to convince you otherwise, than by appealing to your own sense. But what think you of cold?

Hyl. The same that I do of heat. An intense degree of cold is a pain; for to feel a very great cold, is to perceive a great uneasiness: it cannot therefore exist without the mind; but a lesser degree of cold may, as well as a lesser degree of heat.

Phil. Those bodies, therefore, upon whose application to our own, we perceive a moderate degree of heat, must be concluded to have a moderate degree of heat or warmth in them: and those, upon whose application we feel a like degree of cold, must be thought to have cold in them.

Hyl. They must.

Phil. Can any doctrine be true that necessarily leads a man into an absurdity?

Hyl. Without doubt it cannot.

Phil. Is it not an absurdity to think that the same thing should be at the same time both cold and warm?

Hyl. It is.

Phil. Suppose now one of your hands hot, and the other cold, and that they are both at once put into the same vessel of water, in an intermediate state; will not the water seem cold to one hand, and warm to the other?

Hyl. It will.

Phil. Ought we not therefore, by your principles, to conclude it is really both cold and warm at the same time, that is, according to your own concession, to believe an absurdity?

Hyl. I confess it seems so.

Phil. Consequently, the principles themselves are false, since you have granted that no true principle leads to an absurdity.

Hyl. But after all, can any thing be more absurd than to say, *there is no heat in the fire?*

Phil. To make the point still clearer; tell me, whether in two cases exactly alike, we ought not to make the same judgment?

Hyl. We ought.

Phil. When a pin pricks your finger, doth it not rend and divide the fibres of your flesh?

Hyl. It doth.

Phil. And when a coal burns your finger, doth it any more?

Hyl. It doth not.

Phil. Since, therefore, you neither judge the sensation itself occasioned by the pin, nor any thing like it to be in the pin; you should not, conformably to

what you have now granted, judge the sensation occasioned by the fire, or any thing like it, to be in the fire.

Hyl. Well, since it must be so, I am content to yield this point, and acknowledge, that heat and cold are only sensations existing in our minds: but there still remain qualities enough to secure the reality of external things.

Phil. But what will you say, Hylas, if it shall appear that the case is the same with regard to all other sensible qualities, and that they can no more be supposed to exist without the mind, than heat and cold?

Hyl. Then indeed you will have done something to the purpose; but that is what I despair of seeing proved.

Phil. Let us examine them in order. What think you of tastes, do they exist without the mind, or no?

Hyl. Can any man in his senses doubt whether sugar is sweet, or wormwood bitter?

Phil. Inform me, Hylas. Is a sweet taste a particular kind of pleasure or pleasant sensation, or is it not?

Hyl. It is.

Phil. And is not bitterness some kind of uneasiness or pain?

Hyl. I grant it.

Phil. If therefore sugar and wormwood are unthinking corporeal substances existing without the mind, how can sweetness and bitterness, that is, pleasure and pain, agree to them?

Hyl. Hold, Philonous, I now see what it was deluded me all this time. You asked whether heat and cold, sweetness and bitterness, were not particular sorts of pleasure and pain; to which I answered simply, that they were. Whereas I should have thus distinguished: those qualities, as perceived by us, are pleasures or pains, but not as existing in the external objects. We

must not therefore conclude absolutely, that there is no heat in the fire, or sweetness in the sugar, but only that heat or sweetness, as perceived by us, are not in the fire or sugar. What say you to this?

Phil. I say it is nothing to the purpose. Our discourse proceeded altogether concerning sensible things, which you defined to be the things we *immediately perceive by our senses*. Whatever other qualities, therefore, you speak of, as distinct from these, I know nothing of them, neither do they at all belong to the point in dispute. You may, indeed, pretend to have discovered certain qualities which you do not perceive, and assert those insensible qualities exist in fire and sugar. But what use can be made of this to your present purpose, I am at a loss to conceive. Tell me then once more, do you acknowledge that heat and cold, sweetness and bitterness (meaning those qualities which are perceived by the senses), do not exist without the mind?

Hyl. I see it is to no purpose to hold out, so I give up the cause as to those mentioned qualities. Though I profess it sounds oddly, to say that sugar is not sweet.

Phil. But for your farther satisfaction, take this along with you: that which at other times seems sweet, shall, to a distempered palate, appear bitter. And nothing can be plainer, than that divers persons perceive different tastes in the same food, since that which one man delights in, another abhors. And how could this be, if the taste was something really inherent in the food?

Hyl. I acknowledge I know not how.

Phil. In the next place, odours are to be considered. And with regard to these, I would fain know, whether what hath been said of tastes doth not exactly agree to them? Are they not so many pleasing or displeasing sensations?

Hyl. They are.

Phil. Can you then conceive it possible that they should exist in an unperceiving thing?

Hyl. I cannot.

Phil. Or can you imagine, that filth and ordure affect those brute animals that feed on them out of choice, with the same smells which we perceive in them?

Hyl. By no means.

Phil. May we not therefore conclude of smells, as of the other forementioned qualities, that they cannot exist in any but a perceiving substance or mind?

Hyl. I think so.

Phil. Then as to sounds, what must we think of them: are they accidents really inherent in external bodies, or not?

Hyl. That they inhere not in the sonorous bodies, is plain from hence; because a bell struck in the exhausted receiver of an air-pump, sends forth no sound. The air, therefore, must be thought the subject of sound.

Phil. What reason is there for that, Hylas?

Hyl. Because when any motion is raised in the air, we perceive a sound greater or lesser, in proportion to the air's motion; but without some motion in the air, we never hear any sound at all.

Phil. And granting that we never hear a sound but when some motion is produced in the air, yet I do not see how you can infer from thence, that the sound itself is in the air.

Hyl. It is this very motion in the external air, that produces in the mind the sensation of *sound*. For, striking on the drum of the ear, it causeth a vibration, which by the auditory nerves being communicated to the brain, the soul is thereupon affected with the sensation called *sound*.

Phil. What! is sound then a sensation?

Hyl. I tell you, as perceived by us, it is a particular sensation in the mind?

Phil. And can any sensation exist without the mind?

Hyl. No, certainly.

Phil. How then can sound, being a sensation, exist in the air, if by the *air* you mean a senseless substance existing without the mind?

Hyl. You must distinguish, Philonous, between sound as it is perceived by us, and as it is in itself; or (which is the same thing) between the sound we immediately perceive, and that which exists without us. The former, indeed, is a particular kind of sensation, but the latter is merely a vibrative or undulatory motion in the air.

Phil. I thought I had already obviated that distinction by the answer I gave when you were applying it in a like case before. But, to say no more of that, are you sure then that sound is really nothing but motion?

Hyl. I am.

Phil. Whatever therefore agrees to real sound, may with truth be attributed to motion?

Hyl. It may.

Phil. It is then good sense to speak of *motion*, as of a thing that is *loud*, *sweet*, *acute*, or *grave*.

Hyl. I see you are resolved not to understand me. Is it not evident, those accidents or modes belong only to sensible sound, or *sound* in the common acceptation of the word, but not to *sound* in the real and philosophic sense, which, as I just now told you, is nothing but a certain motion the air?

Phil. It seems then there are two sorts of sound, the one vulgar, or that which is heard, the other philosophical and real?

Hyl. Even so.

Phil. And the latter consists in motion?

Hyl. I told you so before.

Phil. Tell me, Hylas, to which of the senses, think you, the idea of motion belongs? to the hearing?

Hyl. No, certainly; but to the sight and touch.

Phil. It should follow then, that according to you, real sounds may possibly be *seen* or *felt*, but never *heard*.

Hyl. Look you, Philonous, you may, if you please, make a jest of my opinion, but that will not alter the truth of things. I own, indeed, the inferences you draw me into, sound something oddly; but common language, you know, is framed by, and for the use of the vulgar: we must not therefore wonder, if expressions adapted to exact philosophic notions, seem uncouth and out of the way.

Phil. Is it come to that? I assure you, I imagine myself to have gained no small point, since you make so light of departing from common phrases and opinions; it being a main part of our inquiry, to examine whose notions are widest of the common road, and most repugnant to the general sense of the world. But can you think it no more than a philosophical paradox, to say that *real sounds are never heard*, and that the idea of them is obtained by some other sense. And is there nothing in this contrary to nature and the truth of things?

Hyl. To deal ingenuously, I do not like it. And after the concessions already made, I had as well grant that sounds too have no real being without the mind.

Phil. And I hope you will make no difficulty to acknowledge the same of colours.

Hyl. Pardon me: the case of colours is very different. Can any thing be plainer, than that we see them on the objects?

Phil. The objects you speak of are, I suppose, corporeal substances existing without the mind?

Hyl. They are.

Phil. And have true and real colours inhering in them?

Hyl. Each visible object hath that colour which we see in it.

Phil. How! is there any thing visible but what we perceive by sight.

Hyl. There is not.

Phil. And do we perceive any thing by sense, which we do not perceive immediately?

Hyl. How often must I be obliged to repeat the same thing? I tell you, we do not.

Phil. Have patience, good Hylas; and tell me once more, whether there is any thing immediately perceived by the senses, except sensible qualities. I know you asserted there was not: but I would now be informed, whether you still persist in the same opinion.

Hyl. I do.

Phil. Pray, is your corporeal substance either a sensible quality, or made up of sensible qualities?

Hyl. What a question that is! who ever thought it was?

Phil. My reason for asking was, because in saying, *each visible object hath that colour which we see in it*, you make visible objects to be corporeal substances; which implies either that corporeal substances are sensible qualities, or else that there is something beside sensible qualities perceived by sight: but as this point was formerly agreed between us, and is still maintained by you, it is a clear consequence, that your corporeal substance is nothing distinct from sensible qualities.

Hyl. You may draw as many absurd consequences as you please, and endeavour to perplex the plainest things; but you shall never persuade me out of my senses. I clearly understand my own meaning.

Phil. I wish you would make me understand it too. But since you are unwilling to have your notion of corporeal substance examined, I shall urge that point no far-

ther. Only be pleased to let me know, whether the same colours which we see, exist in external bodies, or some other.

Hyl. The very same.

Phil. What! are then the beautiful red and purple we see on yonder clouds, really in them? Or do you imagine they have in themselves any other form, than that of a dark mist or vapour?

Hyl. I must own, Philonous, those colours are not really in the clouds as they seem to be at this distance. They are only apparent colours.

Phil. *Apparent* call you them? how shall we distinguish these apparent colours from real?

Hyl. Very easily. Those are to be thought apparent, which, appearing only at a distance, vanish upon a nearer approach.

Phil. And those I suppose are to be thought real, which are discovered by the most near and exact survey.

Hyl. Right.

Phil. Is the nearest and exactest survey made by the help of a microscope, or by the naked eye?

Hyl. By a microscope, doubtless.

Phil. But a miscroscope often discovers colours in an object different from those perceived by the unassisted sight. And in case we had microscopes magnifying to any assigned degree; it is certain, that no object whatsoever viewed through them, would appear in the same colour which it exhibits to the naked eye.

Hyl. And what will you conclude from all this? You cannot argue that there are really and naturally no colours on objects: because by artificial managements they may be altered, or made to vanish.

Phil. I think it may evidently be concluded from your own concessions, that all the colours we see with our naked eyes, are only apparent as those on the clouds, since they vanish upon a more close and accurate inspection, which is afforded us by a microscope. Then as to

what you say by way of prevention: I ask you, whether the real and natural state of an object is better discovered by a very sharp and piercing sight, or by one which is less sharp?

Hyl. By the former without doubt.

Phil. Is it not plain from *dioptrics*, that microscopes make the sight more penetrating, and represent objects as they would appear to the eye, in case it were naturally endowed with a most exquisite sharpness?

Hyl. It is.

Phil. Consequently the microscopical representation is to be thought that which best sets forth the real nature of the thing, or what it is in itself. The colours therefore by it perceived, are more genuine and real than those perceived otherwise.

Hyl. I confess there is something in what you say.

Phil. Besides, it is not only possible, but manifest, that there actually are animals, whose eyes are by nature framed to perceive those things, which by reason of their minuteness escape our sight. What think you of those inconceivably small animals perceived by glasses? must we suppose they are all stark blind? Or, in case they see, can it be imagined their sight hath not the same use in preserving their bodies from injuries, which appears in that of all other animals? And if it hath, is it not evident, they must see particles less than their own bodies, which will present them with a far different view in each object, from that which strikes our senses? Even our own eyes do not always represent objects to us after the same manner. In the *jaundice*, every one knows that all things seem yellow. Is it not therefore highly probable, those animals in whose eyes we discern a very different texture from that of ours, and whose bodies abound with different humours, do not see the same colours in every object that we do? From all which, should it not seem to follow, that all colours are equally apparent, and that

none of those which we perceive are really inherent in any outward object?

Hyl. It should.

Phil. The point will be past all doubt, if you consider that in case colours were real properties or affections inherent in external bodies, they could admit of no alteration, without some change wrought in the very bodies themselves: but is it not evident from what hath been said, that upon the use of microscopes, upon a change happening in the humours of the eye, or a variation of distance, without any manner of real alteration in the thing itself, the colours of any object are either changed, or totally disappear? Nay, all other circumstances remaining the same, change but the situation of some objects, and they shall present different colours to the eye. The same thing happens upon viewing an object in various degrees of light. And what is more known, than that the same bodies appear differently coloured by candle-light, from what they do in the open day? Add to these the experiment of a prism, which separating the heterogeneous rays of light, alters the colour of any object, and will cause the whitest to appear of a deep blue or red to the naked eye. And now tell me, whether you are still of opinion, that every body hath its true real colour inhering in it; and if you think it hath, I would fain know farther from you, what certain distance and position of the object, what peculiar texture and formation of the eye, what degree or kind of light is necessary for ascertaining that true colour, and distinguishing it from apparent ones.

Hyl. I own myself entirely satisfied, that they are all equally apparent; and that there is no such thing as colour really inhering in external bodies, but that it is altogether in the light. And what confirms me in this opinion is, that in proportion to the light, colours are still more or less vivid; and if there be no light, then are

there no colours perceived. Besides, allowing there are colours on external objects, yet how is it possible for us to perceive them? For no external body affects the mind, unless it act first on our organs of sense. But the only action of bodies is motion; and motion cannot be communicated otherwise than by impulse. A distant object therefore cannot act on the eye, nor consequently make itself or its properties perceivable to the soul. Whence it plainly follows, that it is immediately some contiguous substance, which operating on the eye occasions a perception of colours: and such is light.

Phil. How! is light then a substance?

Hyl. I tell you, Philonous, external light is nothing but a thin fluid substance, whose minute particles being agitated with a brisk motion, and in various manners reflected from the different surfaces of outward objects to the eyes, communicate different motions to the optic nerves; which being propagated to the brain, cause therein various impressions; and these are attended with the sensations of red, blue, yellow, &c.

Phil. It seems then, the light doth no more than shake the optic nerves.

Hyl. Nothing else.

Phil. And consequent to each particular motion of the nerves the mind is affected with a sensation, which is some particular colour.

Hyl. Right.

Phil. And these sensations have no existence without the mind.

Hyl. They have not.

Phil. How then do you affirm that colours are in the light, since by *light* you understand a corporeal substance external to the mind?

Hyl. Light and colours, as immediately perceived by us, I grant cannot exist without the mind. But in themselves they are only the motions and configurations of certain insensible particles of matter.

Phil. Colours then in the vulgar sense, or taken for the immediate objects of sight, cannot agree to any but a perceiving substance.

Hyl. That is what I say.

Phil. Well then, since you give up the point as to those sensible qualities, which are alone thought colours by all mankind beside, you may hold what you please with regard to those invisible ones of the philosophers. It is not my business to dispute about them; only I would advise you to bethink yourself, whether considering the inquiry we are upon, it be prudent for you to affirm, *the red and blue which we see are not real colours, but certain unknown motions and figures which no man ever did or can see, are truly so.* Are not these shocking notions, and are not they subject to as many ridiculous inferences, as those you were obliged to renounce before in the case of sounds?

Hyl. I frankly own, Philonous, that it is in vain to stand out any longer. Colours, sounds, tastes, in a word, all those termed *secondary qualities*, have certainly no existence without the mind. But by this acknowledgment I must not be supposed to derogate any thing from the reality of matter or external objects, seeing it is no more than several philosophers maintain, who nevertheless are the farthest imaginable from denying matter. For the clearer understanding of this, you must know sensible qualities are by philosophers divided into *primary* and *secondary*. The former are extension, figure, solidity, gravity, motion, and rest. And these they hold exist really in bodies. The latter are those above enumerated; or briefly, all sensible qualities beside the primary, which they assert are only so many sensations or ideas existing no where but in the mind. But all this, I doubt not, you are already apprised of. For my part, I have been a long time sensible there was such an opinion current among philosophers, but was never thoroughly convinced of its truth till now.

Phil. You are still then of opinion, that extension and figures are inherent in external unthinking substances?

Hyl. I am.

Phil. But what if the same arguments which are brought against secondary qualities, will hold proof against these also?

Hyl. Why then I shall be obliged to think, they too exist only in the mind.

Phil. Is it your opinion, the very figure and extension which you perceive by sense, exist in the outward object or material substance?

Hyl. It is.

Phil. Have all other animals as good grounds to think the same of the figure and extension which they see and feel?

Hyl. Without doubt, if they have any thought at all.

Phil. Answer me, Hylas. Think you the senses were bestowed upon all animals for their preservation and well-being in life? or were they given to men alone for this end?

Hyl. I make no question but they have the same use in all other animals.

Phil. If so, is it not necessary they should be enabled by them to perceive their own limbs, and those bodies which are capable of harming them?

Hyl. Certainly.

Phil. A mite therefore must be supposed to see his own foot, and things equal or even less than it, as bodies of some considerable dimension; though at the same time they appear to you scarce discernible, or at best as so many visible points?

Hyl. I cannot deny it.

Phil. And to creatures less than the mite they will seem yet larger.

Hyl. They will.

Phil. Insomuch that what you can hardly discern,

will to another extremely minute animal appear as some huge mountain.

Hyl. All this I grant.

Phil. Can one and the same thing be at the same time in itself of different dimensions?

Hyl. That were absurd to imagine.

Phil. But from what you have laid down it follows, that both the extension by you perceived, and that perceived by the mite itself, as likewise all those perceived by lesser animals, are each of them the true extension of the mite's foot, that is to say, by your own principles you are led into an absurdity.

Hyl. There seems to be some difficulty in the point.

Phil. Again, have you not acknowledged that no real inherent property of any object can be changed, without some change in the thing itself?

Hyl. I have.

Phil. But as we approach to or recede from an object, the visible extension varies, being at one distance ten or a hundred times greater than at another. Doth it not therefore follow from hence likewise, that it is not really inherent in the object?

Hyl. I own I am at a loss what to think.

Phil. Your judgment will soon be determined, if you will venture to think as freely concerning this quality, as you have done concerning the rest. Was it not admitted as a good argument, that neither heat nor cold was in the water, because it seemed warm to one hand, and cold to the other?

Hyl. It was.

Phil. Is it not the very same reasoning to conclude, there is no extension or figure in an object, because to one eye it shall seem little, smooth, and round, when at the same time it appears to the other, great, uneven, and angular?

Hyl. The very same. But does this latter fact ever happen?

Phil. You may at any time make the experiment, by looking with one eye bare, and with the other through a microscope.

Hyl. I know not how to maintain it, and yet I am loath to give up *extension*, I see so many odd consequences following upon such a concession.

Phil. Odd, say you? After the concessions already made, I hope you will stick at nothing for its oddness. But on the other hand should it not seem very odd, if the general reasoning which includes all other sensible qualities did not also include extension? If it be allowed that no idea nor any thing like an idea can exist in an unperceiving substance, then surely it follows, that no figure or mode of extension, which we can either perceive or imagine, or have any idea of, can be really inherent in matter; not to mention the peculiar difficulty there must be, in conceiving a material substance, prior to and distinct from extension, to be the *substratum* of extension. Be the sensible quality what it will, figure, or sound, or colour; it seems alike impossible it should subsist in that which doth not perceive it.

Hyl. I give up the point for the present, reserving still a right to retract my opinion, in case I shall hereafter discover any false step in my progress to it.

Phil. That is a right you cannot be denied. Figures and extension being dispatched, we proceed next to *motion*. Can a real motion in any external body be at the same time both very swift and very slow?

Hyl. It cannot.

Phil. Is not the motion of a body swift in a reciprocal proportion to the time it takes up in describing any given space? Thus a body that describes a mile in an hour, moves three times faster than it would in case it described only a mile in three hours.

Hyl. I agree with you.

Phil. And is not time measured by the succession of ideas in our minds?

Hyl. It is.

Phil. And is it not possible ideas should succeed one another twice as fast in your mind, as they do in mine, or in that of some spirit of another kind?

Hyl. I own it.

Phil. Consequently the same body may to another seem to perform its motion over any space in half the time that it doth to you. And the same reasoning will hold as to any other proportion: that is to say, according to your principles (since the motions perceived are both really in the object) it is possible one and the same body shall be really moved the same way at once, both very swift and very slow. How is this consistent either with common sense, or with what you just now granted?

Hyl. I have nothing to say to it.

Phil. Then as for *solidity*; either you do not mean any sensible quality by that word, and so it is beside our inquiry: or if you do, it must be either hardness or resistance. But both the one and the other are plainly relative to our senses: it being evident, that what seems hard to one animal, may appear soft to another, who hath greater force and firmness of limbs. Nor is it less plain, that the resistance I feel is not in the body.

Hyl. I own the very sensation of resistance, which is all you immediately perceive, is not in the *body*, but the cause of that sensation is.

Phil. But the causes of our sensations are not things immediately perceived, and therefore not sensible. This point I thought had been already determined.

Hyl. I own it was; but you will pardon me if I seem a little embarrassed: I know not how to quit my old notions.

Phil. To help you out, do but consider, that if extension be once acknowledged to have no existence without the mind, the same must necessarily be granted of motion, solidity, and gravity, since they all evidently

suppose extension. It is therefore superfluous to inquire particularly concerning each of them. In denying extension, you have denied them all to have any real existence.

Hyl. I wonder Philonous, if what you say be true, why those philosophers who deny the secondary qualities any real existence, should yet attribute it to the primary. If there is no difference between them, how can this be accounted for?

Phil. It is not my business to account for every opinion of the philosophers. But among other reasons which may be assigned for this, it seems probable, that pleasure and pain being rather annexed to the former than the latter, may be one. Heat and cold, tastes and smells, have something more vividly pleasing or disagreeable than the ideas of extension, figure, and motion affect us with. And it being too visibly absurd to hold, that pain or pleasure can be in an unperceiving substance, men are more easily weaned from believing the external existence of the secondary, than the primary qualities. You will be satisfied there is something in this, if you recollect the difference you made between an intense and more moderate degree of heat, allowing the one a real existence, while you denied it to the other. But after all, there is no rational ground for that distinction; for surely an indifferent sensation is as truly *a sensation* as one more pleasing or painful; and consequently should not any more than they be supposed to exist in an unthinking subject.

Hyl. It is just come into my head, Philonous, that I have somewhere heard of a distinction between absolute and sensible extension. Now though it be acknowledged that *great* and *small*, consisting merely in the relation which other extended beings have to the parts of our own bodies, do not really inhere in the substances themselves; yet nothing obliges us to hold the same with regard to *absolute extension*, which is something abstracted from *great* and *small*, from this or that par-

ticular magnitude or figure. So likewise as to motion, *swift* and *slow* are altogether relative to the succession of ideas in our own minds. But it doth not follow, because those modifications of motion exist not without the mind, that therefore absolute motion abstracted from them doth not.

Phil. Pray what is it that distinguishes one motion, or one part of extension from another? Is it not something sensible, as some degree of swiftness or slowness, some certain magnitude or figure peculiar to each?

Hyl. I think so.

Phil. These qualities therefore stripped of all sensible properties, are without all specific and numerical differences, as the schools call them.

Hyl. They are.

Phil. That is to say, they are extension in general, and motion in general.

Hyl. Let it be so.

Phil. But it is a universally received maxim, that *Every thing which exists, is particular.* How then can motion in general, or extension in general exist in any corporeal substance?

Hyl. I will take time to solve your difficulty.

Phil. But I think the point may be speedily decided. Without doubt you can tell, whether you are able to frame this or that idea. Now I am content to put our dispute on this issue. If you can frame in your thoughts a distinct abstract idea of motion or extension, divested of all those sensible modes, as swift and slow, great and small, round and square, and the like, which are acknowledged to exist only in the mind. I will then yield the point you contend for. But if you cannot, it will be unreasonable on your side to insist any longer upon what you have no notion of.

Hyl. To confess ingenuously, I cannot.

Phil. Can you even separate the ideas of extension and motion, from the ideas of all those qualities which they who make the distinction, term *secondary*.

Hyl. What! is it not an easy matter to consider extension and motion by themselves, abstracted from all other sensible qualities? Pray how do the mathematicians treat of them?

Phil. I acknowledge, Hylas, it is not difficult to form general propositions and reasonings about those qualities, without mentioning any other; and in this sense to consider or treat of them abstractedly. But how doth it follow that because I can pronounce the word *motion* by itself, I can form the idea of it in my mind exclusive of body? Or because theorems may be made of extension and figures, without any mention of *great* or *small*, or any other sensible mode or quality; that therefore it is possible such an abstract idea of extension, without any particular size or figure, or sensible quality, should be distinctly formed, and apprehended by the mind? Mathematicians treat of quantity, without regarding what other sensible qualities it is attended with, as being altogether indifferent to their demonstrations. But when laying aside the words, they contemplate the bare ideas, I believe you will find, they are not the pure abstracted ideas of extension.

Hyl. But what say you to *pure intellect?* May not abstracted ideas be framed by that faculty?

Phil. Since I cannot frame abstract ideas at all, it is plain I cannot frame them by the help of *pure intellect*, whatsoever faculty you understand by those words. Besides, not to inquire into the nature of pure intellect and its spiritual objects, as *virtue*, *reason*, *God*, or the like, thus much seems manifest, that sensible things are only to be perceived by sense, or represented by the imagination. Figures therefore and extension, being originally perceived by sense, do not belong to pure intellect: but for your farther satisfaction, try if you can frame the idea of any figure, abstracted from all particularities of size, or even from other sensible qualities.

Hyl. Let me think a little——I do not find that I can.

Phil. And can you think it possible, that should really exist in nature, which implies a repugnancy in its conception?

Hyl. By no means.

Phil. Since therefore it is impossible even for the mind to disunite the ideas of extension and motion from all other sensible qualities, doth it not follow, that where the one exist, there necessarily the other exist likewise?

Hyl. It should seem so.

Phil. Consequently the very same arguments which you admitted, as conclusive against the secondary qualities, are without any farther application of force against the primary too. Besides, if you will trust your senses, is it not plain all sensible qualities coexist, or to them appear as being in the same place? Do they ever represent a motion, or figure, as being divested of all other visible and tangible qualities?

Hyl. You need say no more on this head. I am free to own, if there be no secret error or oversight in our proceedings hitherto, that all sensible qualities are alike to be denied existence without the mind. But my fear is, that I have been too liberal in my former concessions, or overlooked some fallacy or other. In short, I did not take time to think.

Phil. For that matter, Hylas, you may take what time you please in reviewing the progress of our inquiry. You are at liberty to recover any slips you might have made, or offer whatever you have omitted, which makes for your first opinion.

Hyl. One great oversight I take to be this: that I did not sufficiently distinguish the *object* from the *sensation.* Now though this latter may not exist without the mind, yet it will not thence follow that the former cannot.

Phil. What object do you mean? The object of the senses?

Hyl. The same.

Phil. It is then immediately perceived?

Hyl. Right.

Phil. Make me to understand the difference between what is immediately perceived, and a sensation.

Hyl. The sensation I take to be an act of the mind perceiving; beside which, there is something perceived; and this I call the *object*. For example, there is red and yellow on that tulip. But then the act of perceiving those colours is in me only, and not in the tulip.

Phil. What tulip do you speak of? Is it that which you see?

Hyl. The same.

Phil. And what do you see beside colour, figure, and extension?

Hyl. Nothing.

Phil. What you would say then is, that the red and yellow are coexistent with the extension; is it not?

Hyl. That is not all; I would say, they have a real existence without the mind, in some unthinking substance.

Phil. That the colours are really in the tulip which I see, is manifest. Neither can it be denied, that this tulip may exist independent of your mind or mine; but that any immediate object of the senses, that is, any idea, or combination of ideas, should exist in an unthinking substance, or exterior to all minds, is in itself an evident contradiction. Nor can I imagine how this follows from what you said just now, to wit, that the red and yellow were on the tulip *you saw*, since you do not pretend to *see* that unthinking substance.

Hyl. You have an artful way, Philonous, of diverting our inquiry from the subject.

Phil. I see you have no mind to be pressed that way. To return then to your distinction between *sensation*

and *object*; if I take you right, you distinguish in every perception two things, the one an action of the mind, the other not.

Hyl. True.

Phil. And this action cannot exist in, or belong to, any unthinking thing; but whatever beside is implied in a perception, may?

Hyl. That is my meaning.

Phil. So that if there was a perception without any act of the mind, it were possible such a perception should exist in an unthinking substance?

Hyl. I grant it. But it is impossible there should be such a perception.

Phil. When is the mind said to be active?

Hyl. When it produces, puts an end to, or changes, any thing.

Phil. Can the mind produce, discontinue, or change any thing, but by an act of the will?

Hyl. It cannot.

Phil. The mind therefore is to be accounted active in its perceptions, so far forth as volition is included in them?

Hyl. It is.

Phil. In plucking this flower, I am active, because I do it by the motion of my hand, which was consequent upon my volition; so likewise in applying it to my nose. But is either of these smelling?

Hyl. No.

Phil. I act too in drawing the air through my nose; because my breathing so rather than otherwise, is the effect of my volition. But neither can this be called *smelling*: for if it were, I should smell every time I breathed in that manner?

Hyl. True.

Phil. Smelling then is somewhat consequent to all this?

Hyl. It is.

Phil. But I do not find my will concerned any farther. Whatever more there is, as that I perceive such a particular smell or any smell at all, this is independent of my will, and therein I am altogether passive. Do you find it otherwise with you, Hylas?

Hyl. No, the very same.

Phil. Then as to seeing, is it not in your power to open your eyes, or keep them shut; to turn them this or that way?

Hyl. Without doubt.

Phil. But doth it in like manner depend on your will, that in looking on this flower, you perceive *white* rather than any other colour? Or directing your open eyes towards yonder part of the heaven, can you avoid seeing the sun? Or is light or darkness the effect of your volition?

Hyl. No certainly.

Phil. You are then in these respects altogether passive.

Hyl. I am.

Phil. Tell me now, whether *seeing* consists in perceiving light and colours, or in opening and turning the eyes?

Hyl. Without doubt, in the former.

Phil. Since therefore you are in the very perception of light and colours altogether passive, what is become of that action you were speaking of, as an ingredient in every sensation? And doth it not follow from your own concessions, that the perception of light and colours, including no action in it, may exist in an unperceiving substance? And is not this a plain contradiction?

Hyl. I know not what to think of it.

Phil. Besides, since you distinguish the *active* and *passive* in every perception, you must do it in that of pain. But how is it possible that pain, be it as little active as you please, should exist in an unperceiving substance? In short, do but consider the point, and then confess in-

genuously, whether light and colours, tastes, sounds, &c. are not all equally passions or sensations in the soul. You may indeed call them *external objects*, and give them in words what subsistence you please. But examine your own thoughts, and then tell me whether it be not as I say?

Hyl. I acknowledge, Philonous, that upon a fair observation of what passes in my mind, I can discover nothing else, but that I am a thinking being, affected with variety of sensations; neither is it possible to conceive how a sensation should exist in an unperceiving substance. But then on the other hand, when I look on sensible things in a different view, considering them as so many modes and qualities, I find it necessary to suppose a material *substratum*, without which they cannot be conceived to exist.

Phil. Material substratum call you it? Pray, by which of your senses came you acquainted with that being?

Hyl. It is not itself sensible; its modes and qualities only being perceived by the senses.

Phil. I presume then, it was by reflection and reason you obtained the idea of it?

Hyl. I do not pretend to any proper positive idea of it. However I conclude it exists, because qualities cannot be conceived to exist without a support.

Phil. It seems then you have only a relative notion of it, or that you conceive it not otherwise than by conceiving the relation it bears to sensible qualities?

Hyl. Right.

Phil. Be pleased therefore to let me know wherein that relation consists.

Hyl. Is it not sufficiently expressed in the term *substratum*, or *substance*?

Phil. If so, the word *substratum* should import, that it is spread under the sensible qualities or accidents?

Hyl. True.

Phil. And consequently under extension?

Hyl. I own it.

Phil. It is therefore somewhat in its own nature entirely distinct from extension?

Hyl. I tell you, extension is only a mode, and matter is something that supports modes. And is it not evident the thing supported is different from the thing supporting?

Phil. So that something distinct from, and exclusive of extension, is supposed to be the *substratum* of extension?

Hyl. Just so.

Phil. Answer me, Hylas. Can a thing be spread without extension? or is not the idea of extension necessarily included in *spreading?*

Hyl. It is.

Phil. Whatsoever therefore you suppose spread under any thing, must have in itself an extension distinct from the extension of that thing under which it is spread?

Hyl. It must.

Phil. Consequently every corporeal substance being the *substratum* of extension, must have in itself another extension, by which it is qualified to be a *substratum:* and so on to infinity? And I ask whether this be not absurd in itself, and repugnant to what you granted just now, to wit, that the *substratum* was something distinct from, and exclusive of extension?

Hyl. Aye but, Philonous, you take me wrong. I do not mean that matter is *spread* in a gross literal sense under extension. The word *substratum* is used only to express in general the same thing with *substance.*

Phil. Well then, let us examine the relation implied in the term *substance.* Is it not that it stands under accidents?

Hyl. The very same.

Phil. But that one thing may stand under or support another, must it not be extended?

Hyl. It must.

Phil. Is not therefore this supposition liable to the same absurdity with the former?

Hyl. You still take things in a strict literal sense: that is not fair, Philonous.

Phil. I am not for imposing any sense on your words: you are at liberty to explain them as you please. Only I beseech you, make me understand something by them. You tell me matter supports or stands under accidents. How! is it as your legs support your body?

Hyl. No; that is the literal sense.

Phil. Pray let me know any sense, literal or not literal, that you understand it in.——How long must I wait for an answer, Hylas?

Hyl. I declare I know not what to say. I once thought I understood well enough what was meant by matter's supporting accidents. But now the more I think on it, the less can I comprehend it; in short I find that I know nothing of it.

Phil. It seems then you have no idea at all, neither relative nor positive, of matter; you know neither what it is in itself, nor what relation it bears to accidents?

Hyl. I acknowledge it.

Phil. And yet you asserted, that you could not conceive how qualities or accidents should really exist, without conceiving at the same time a material support of them?

Hyl. I did.

Phil. That is to say, when you conceive the real existence of qualities, you do withal conceive something which you cannot conceive?

Hyl. It was wrong I own. But still I fear there is some fallacy or other. Pray what think you of this? It is just come into my head, that the ground of all our mistake lies in your treating of each quality by itself. Now, I grant that each quality cannot singly subsist without the mind. Colour cannot without extension,

neither can figure without some other sensible quality. But as the several qualities united or blended together form entire sensible things, nothing hinders why such things may not be supposed to exist without the mind.

Phil. Either, Hylas, you are jesting, or have a very bad memory. Though indeed we went through all the qualities by name one after another; yet my arguments, or rather your concessions, no where tended to prove, that the secondary qualities did not subsist each alone by itself; but that they were not *at all* without the mind. Indeed in treating of figure and motion, we concluded they could not exist without the mind, because it was impossible even in thought to separate them from all secondary qualities, so as to conceive them existing by themselves. But then this was not the only argument made use of upon that occasion. But (to pass by all that hath been hitherto said, and reckon it for nothing, if you will have it so) I am content to put the whole upon this issue. If you can conceive it possible for any mixture or combination of qualities, or any sensible object whatever, to exist without the mind, then I will grant it actually to be so.

Hyl. If it comes to that, the point will soon be decided. What more easy than to conceive a tree or house existing by itself, independent of, and unperceived by, any mind whatsoever? I do at this present time conceive them existing after that manner.

Phil. How say you, Hylas, can you see a thing which is at the same time unseen?

Hyl. No, that were a contradiction.

Phil. Is it not as great a contradiction to talk of *conceiving* a thing which is *unconceived?*

Hyl. It is.

Phil. The tree or house therefore which you think of, is conceived by you?

Hyl. How should it be otherwise?

Phil. And what is conceived, is surely in the mind?

Hyl. Without question, that which is conceived is in the mind.

Phil. How then came you to say, you conceived a house or tree existing independent and out of all minds whatsoever?

Hyl. That was I own an oversight; but stay, let me consider what led me into it.—It is a pleasant mistake enough. As I was thinking of a tree in a solitary place, where no one was present to see it, methought that was to conceive a tree as existing unperceived or unthought of, not considering that I myself conceived it all the while. But now I plainly see, that all I can do is to frame ideas in my own mind. I may indeed conceive in my own thoughts the idea of a tree, or a house, or a mountain, but that is all. And this is far from proving, that I can conceive them *existing out of the minds of all spirits.*

Phil. You acknowledge then that you cannot possibly conceive, how any one corporeal sensible thing should exist otherwise than in a mind?

Hyl. I do.

Phil. And yet you will earnestly contend for the truth of that which you cannot so much as conceive?

Hyl. I profess I know not what to think, but still there are some scruples remain with me. Is it not certain I see things at a distance? Do we not perceive the stars and moon, for example, to be a great way off? Is not this, I say, manifest to the senses?

Phil. Do you not in a dream too perceive those or the like objects?

Hyl. I do.

Phil. And have they not then the same appearance of being distant?

Hyl. They have.

Phil. But you do not thence conclude the apparitions in a dream to be without the mind?

Hyl. By no means.

Phil. You ought not therefore to conclude that sensible objects are without the mind, from their appearance or manner wherein they are perceived.

Hyl. I acknowledge it. But doth not my sense deceive me in those cases?

Phil. By no means. The idea or thing which you immediately perceive, neither sense nor reason informs you that it actually exists without the mind. By sense you only know that you are affected with such certain sensations of light and colours, &c. And these you will not say are without the mind.

Hyl. True: but beside all that, do you not think the sight suggests something of *outness* or *distance*?

Phil. Upon approaching a distant object, do the visible size and figure change perpetually, or do they appear the same at all distances?

Hyl. They are in a continual change.

Phil. Sight therefore doth not suggest or any way inform you, that the visible object you immediately perceive, exists at a distance,* or will be perceived when you advance farther onward, there being a continued series of visible objects succeeding each other during the whole time of your approach.

Hyl. It doth not; but still I know, upon seeing an object, what object I shall perceive after having passed over a certain distance: no matter whether it be exactly the same or no: there is still something of distance suggested in the case.

Phil. Good Hylas, do but reflect a little on the point, and then tell me whether there be any more in it than this. From the ideas you actually perceive by sight, you have by experience learned to collect what other ideas you will (according to the standing order of nature) be affected with, after such a certain succession of time and motion.

Hyl. Upon the whole, I take it to be nothing else.

* See the Essay towards a new Theory of Vision; and its Vindication.

Phil. Now is it not plain, that if we suppose a man born blind was on a sudden made to see, he could at first have no experience of what may be suggested by sight?

Hyl. It is.

Phil. He would not then according to you have any notion of distance annexed to the things he saw; but would take them for a new set of sensations existing only in his mind?

Hyl. It is undeniable.

Phil. But to make it still more plain: is not *distance* a line turned endwise to the eye?

Hyl. It is.

Phil. And can a line so situated be perceived by sight?

Hyl. It cannot.

Phil. Doth it not therefore follow that distance is not properly and immediately perceived by sight?

Hyl. It should seem so.

Phil. Again, is it your opinion that colours are at a distance?

Hyl. It must be acknowledged, they are only in the mind.

Phil. But do not colours appear to the eye as coexisting in the same place with extension and figures?

Hyl. They do.

Phil. How can you then conclude from sight, that figures exist without, when you acknowledge colours do not; the sensible appearance being the very same with regard to both?

Hyl. I know not what to answer.

Phil. But allowing that distance was truly and immediately perceived by the mind, yet it would not thence follow it existed out of the mind. For whatever is immediately perceived is an idea: and can any *idea* exist out of the mind?

Hyl. To suppose that, were absurd: but inform me, Philonous, can we perceive or know nothing beside our ideas?

Phil. As for the rational deducing of causes from effects, that is beside our inquiry. And by the senses you can best tell, whether you perceive any thing which is not immediately perceived. And I ask you, whether the things immediately perceived, are other than your own sensations or ideas? You have indeed more than once, in the course of this conversation, declared yourself on those points; but you seem by this last question to have departed from what you then thought.

Hyl. To speak the truth, Philonous, I think there are two kinds of objects, the one perceived immediately, which are likewise called *ideas*; the other are real things or external objects perceived by the mediation of ideas, which are their images and representations. Now I own, ideas do not exist without the mind; but the latter sort of objects do. I am sorry I did not think of this distinction sooner; it would probably have cut short your discourse.

Phil. Are those external objects perceived by sense, or by some other faculty?

Hyl. They are perceived by sense.

Phil. How! is there any thing perceived by sense, which is not immediately perceived?

Hyl. Yes, Philonous, in some sort there is. For example, when I look on a picture or statue of Julius Cesar, I may be said after a manner to perceive him (though not immediately) by my senses.

Phil. It seems then you will have our ideas, which alone are immediately perceived, to be pictures of external things: and that these also are perceived by sense, inasmuch as they have a conformity or resemblance to our ideas?

Hyl. That is my meaning.

Phil. And in the same way that Julius Cesar, in himself invisible, is nevertheless perceived by sight; real things in themselves imperceptible, are perceived by sense.

Hyl. In the very same.

Phil. Tell me, Hylas, when you behold the picture of Julius Cesar, do you see with your eyes any more than some colours and figures with a certain symmetry and composition of the whole?

Hyl. Nothing else.

Phil. And would not a man, who had never known any thing of Julius Cesar, see as much?

Hyl. He would.

Phil. Consequently he hath his sight, and the use of it, in as perfect a degree as you?

Hyl. I agree with you.

Phil. Whence comes it then that your thoughts are directed to the Roman emperor, and his are not? This cannot proceed from the sensations or ideas of sense by you then perceived; since you acknowledge you have no advantage over him in that respect. It should seem therefore to proceed from reason and memory: should it not?

Hyl. it should.

Phil. Consequently it will not follow from that instance, that any thing is perceived by sense which is not immediately perceived. Though I grant we may in one acceptation be said to perceive sensible things mediately by sense; that is, when from a frequently-perceived connexion, the immediate perception of ideas by one sense suggests to the mind others perhaps belonging to another sense, which are wont to be connected with them. For instance, when I hear a coach drive along the streets, immediately I perceive only the sound; but from the experience I have had that such a sound is connected with a coach, I am said to hear the coach. It is nevertheless evident, that in truth and strictness, nothing can be *heard* but *sound:* and the coach is not then properly perceived by sense, but suggested from experience. So likewise when we are said to see a red-hot bar of iron; the solidity and heat of the iron are not the objects of sight, but suggested to the imagination by the colour and

figure, which are properly perceived by that sense. In short, those things alone are actually and strictly perceived by any sense, which would have been perceived in case that same sense had then been first conferred on us. As for other things, it is plain they are only suggested to the mind by experience grounded on former perceptions. But to return to your comparison of Cesar's picture, it is plain, if you keep to that, you must hold, the real things or archetypes of our ideas are not perceived by sense, but by some internal faculty of the soul, as reason or memory. I would therefore fain know, what arguments you can draw from reason for the existence of what you call *real things* or *material objects*. Or whether you remember to have seen them formerly as they are in themselves; or if you have heard or read of any one that did.

Hyl. I see, Philonous, you are disposed to raillery; but that will never convince me.

Phil. My aim is only to learn from you the way to come at the knowledge of *material beings*. Whatever we perceive, is perceived immediately or mediately: by sense, or by reason and reflection. But as you have excluded sense, pray shew me what reason you have to believe their existence; or what *medium* you can possibly make use of, to prove it either to mine or your own understanding.

Hyl. To deal ingenuously, Philonous, now I consider the point, I do not find I can give you any good reason for it. But thus much seems pretty plain, that it is at least possible such things may really exist. And as long as there is no absurdity in supposing them, I am resolved to believe as I did, till you bring good reasons to the contrary.

Phil. What! is it come to this, that you only believe the existence of material objects, and that your belief is founded barely on the possibility of its being true? Then you will have me bring reasons against it: though

another would think it reasonable, the proof should lie on him who holds the affirmative. And after all, this very point which you are now resolved to maintain without any reason, is in effect what you have more than once during this discourse seen good reason to give up. But to pass over all this; if I understand you rightly, you say our ideas do not exist without the mind; but that they are copies, images, or representations, of certain originals that do?

Hyl. You take me right.

Phil. They are then like external things?

Hyl. They are.

Phil. Have those things a stable and permanent nature independent of our senses; or are they in a perpetual change, upon our producing any motions in our bodies, suspending, exerting, or altering, our faculties or organs of sense?

Hyl. Real things, it is plain, have a fixed and real nature, which remains the same, notwithstanding any change in our senses, or in the posture and motion of our bodies; which indeed may affect the ideas in our minds, but it were absurd to think they had the same effect on things existing without the mind.

Phil. How then is it possible, that things perpetually fleeting and variable as our ideas, should be copies or images of any thing fixed and constant? Or in other words, since all sensible qualities, as size, figure, colour, &c. that is, our ideas are continually changing upon every alteration in the distance, medium, or instruments of sensation; how can any determinate material objects be properly represented or painted forth by several distinct things, each of which is so different from and unlike the rest? Or if you say it resembles some one only of our ideas, how shall we be able to distinguish the true copy from all the false ones?

Hyl. I profess, Philonous, I am at a loss. I know not what to say to this.

Phil. But neither is this all. Which are material objects in themselves, perceptible or imperceptible?

Hyl. Properly and immediately nothing can be perceived but ideas. All material things therefore are in themselves insensible, and to be perceived only by our ideas.

Phil. Ideas then are sensible, and their archetypes or originals insensible?

Hyl. Right.

Phil. But how can that which is sensible be like that which is insensible? Can a real thing in itself *invisible* be like a *colour*; or a real thing which is not *audible* be like a *sound?* In a word, can any thing be like a sensation or idea, but another sensation or idea?

Hyl. I must own, I think not.

Phil. Is it possible there should be any doubt in the point? Do you not perfectly know your own ideas?

Hyl. I know them perfectly; since what I do not perceive or know, can be no part of my idea.

Phil. Consider therefore, and examine them, and then tell me if there be any thing in them which can exist without the mind? or if you can conceive any thing like them existing without the mind?

Hyl. Upon inquiry, I find it is impossible for me to conceive or understand how any thing but an idea can be like an idea. And it is most evident, that *no idea can exist without the mind.*

Phil. You are therefore by your principles forced to deny the reality of sensible things, since you made it to consist in an absolute existence exterior to the mind. That is to say, you are a downright sceptic. So I have gained my point, which was to shew your principles led to scepticism.

Hyl. For the present I am, if not entirely convinced, at least silenced.

Phil. I would fain know what more you would require in order to a perfect conviction. Have you not had

the liberty of explaining yourself all manner of ways? Were any little slips in discourse laid hold and insisted on? Or were you not allowed to retract or reinforce any thing you had offered, as best served your purpose? Hath not every thing you could say been heard and examined with all the fairness imaginable? In a word, have you not in every point been convinced out of your own mouth? And if you can at present discover any flaw in any of your former concessions, or think of any remaining subterfuge, any new distinction, colour, or comment whatsoever, why do you not produce it?

Hyl. A little patience, Philonous. I am at present so amazed to see myself ensnared, and as it were imprisoned in the labyrinths you have drawn me into, that on the sudden it cannot be expected I should find my way out. You must give me time to look about me, and recollect myself.

Phil. Hark; is not this the college-bell?

Hyl. It rings for prayers.

Phil. We will go in then if you please, and meet here again to-morrow morning. In the mean time you may employ your thoughts on this morning's discourse, and try if you can find any fallacy in it, or invent any new means to extricate yourself.

Hyl. Agreed.

THE

SECOND DIALOGUE.

HYLAS.

I BEG your pardon, Philonous, for not meeting you sooner. All this morning my head was so filled with our late conversation, that I had not leisure to think of the time of the day, or indeed of any thing else.

Philonous. I am glad you were so intent upon it, in hopes if there were any mistakes in your concessions, or fallacies in my reasonings from them, you will now discover them to me.

Hyl. I assure you, I have done nothing ever since I saw you, but search after mistakes and fallacies, and with that view have minutely examined the whole series of yesterday's discourse: but all in vain, for the notions it led me into, upon review, appear still more clear and evident; and the more I consider them, the more irresistibly do they force my assent.

Phil. And is not this, think you, a sign that they are genuine, that they proceed from nature, and are conformable to right reason? Truth and beauty are in this alike, that the strictest survey sets them both off to advantage; while the false lustre of error and disguise cannot endure being reviewed, or too nearly inspected.

Hyl. I own there is a great deal in what you say. Nor can any one be more entirely satisfied of the truth of those odd consequences, so long as I have in view the reasonings that lead to them. But when these are

out of my thoughts, there seems, on the other hand, something so satisfactory, so natural and intelligible, in the modern way of explaining things, that, I profess, I know not how to reject it.

Phil. I know not what way you mean.

Hyl. I mean the way of accounting for our sensations or ideas.

Phil. How is that?

Hyl. It is supposed the soul makes her residence in some part of the brain, from which the nerves take their rise, and are thence extended to all parts of the body: and that outward objects, by the different impressions they make on the organs of sense, communicate certain vibrative motions to the nerves; and these being filled with spirits, propagate them to the brain or seat of the soul, which, according to the various impressions or traces thereby made in the brain, is variously affected with ideas.

Phil. And call you this an explication of the manner whereby we are affected with ideas?

Hyl. Why not, Philonous, have you any thing to object against it?

Phil. I would first know whether I rightly understand your hypothesis. You make certain traces in the brain to be the causes or occasions of our ideas. Pray tell me, whether by the *brain* you mean any sensible thing?

Hyl. What else think you I could mean?

Phil. Sensible things are all immediately perceivable; and those things which are immediately perceivable, are ideas; and these exist only in the mind. Thus much you have, if I mistake not, long since agreed to.

Hyl. I do not deny it.

Phil. The brain, therefore, you speak of, being a sensible thing, exists only in the mind. Now, I would fain know, whether you think it reasonable to suppose, that one idea or thing existing in the mind, occasions all

other ideas. And if you think so, pray how do you account for the origin of that primary idea or brain itself?

Hyl. I do not explain the origin of our ideas by that brain which is perceivable to sense, this being itself only a combination of sensible ideas, but by another which I imagine.

Phil. But are not things imagined as truly in the mind as things perceived?

Hyl. I must confess they are.

Phil. It comes, therefore, to the same thing; and you have been all this while accounting for ideas, by certain motions or impressions in the brain, that is, by some alterations in an idea, whether sensible or imaginable, it matters not.

Hyl. I begin to suspect my hypothesis.

Phil. Beside spirits, all that we know or conceive are our own ideas. When, therefore, you say, all ideas are occasioned by impressions in the brain, do you conceive this brain or no? If you do, then you talk of ideas imprinted in an idea, causing that same idea, which is absurd. If you do not conceive it, you talk unintelligibly, instead of forming a reasonable hypothesis.

Hyl. I now clearly see it was a mere dream. There is nothing in it.

Phil. You need not be much concerned at it: for after all, this way of explaining things, as you called it, could never have satisfied any reasonable man. What connexion is there between a motion in the nerves, and the sensations of sound or colour in the mind? Or how is it possible these should be the effect of that?

Hyl. But I could never think it had so little in it as now it seems to have.

Phil. Well then, are you at length satisfied that no sensible things have a real existence; and that you are in truth an arrant sceptic?

Hyl. It is too plain to be denied.

Phil. Look! are not the fields covered with a delightful verdure? Is there not something in the woods and groves, in the rivers and clear springs, that sooths, that delights, that transports the soul? At the prospect of the wide and deep ocean, or some huge mountain whose top is lost in the clouds, or of an old gloomy forest, are not our minds filled with a pleasing horror? Even in rocks and deserts, is there not an agreeable wildness? How sincere a pleasure is it to behold the natural beauties of the earth! To preserve and renew our relish for them, is not the veil of night alternately drawn over her face, and doth she not change her dress with the seasons? How aptly are the elements disposed! What variety and use in the meanest productions of nature! What delicacy, what beauty, what contrivance, in animal and vegetable bodies! How exquisitely are all things suited, as well to their particular ends, as to constitute opposite parts of the whole! And while they mutually aid and support, do they not also set off and illustrate each other? Raise now your thoughts from this ball of earth, to all those glorious luminaries that adorn the high arch of heaven. The motion and situation of the planets, are they not admirable for use and order? Were those (miscalled *erratic)* globes ever known to stray, in their repeated journeys through the pathless void? Do they not measure areas round the sun ever proportioned to the times? So fixed, so immutable, are the laws by which the unseen Author of nature actuates the universe. How vivid and radiant is the lustre of the fixed stars! How magnificent and rich that negligent profusion, with which they appear to be scattered throughout the whole azure vault! Yet if you take the telescope, it brings into your sight a new host of stars that escape the naked eye. Here they seem contiguous and minute, but to a nearer view immense orbs of light at various distances, far sunk in the abyss of space. Now you must call imagination to your aid.

The feeble narrow sense cannot descry innumerable worlds revolving round the central fires; and in those worlds the energy of an all-perfect mind displayed in endless forms. But neither sense nor imagination are big enough to comprehend the boundless extent with all its glittering furniture. Though the labouring mind exert and strain each power to its utmost reach, there still stands out ungrasped a surplusage immeasurable. Yet all the vast bodies that compose this mighty frame, how distant and remote soever, are by some secret mechanism, some Divine art and force linked in a mutual dependence and intercourse with each other, even with this earth, which was almost slipt from my thoughts, and lost in the crowd of worlds. Is not the whole system immense, beautiful, glorious beyond expression and beyond thought! what treatment, then, do those philosophers deserve, who would deprive these noble and delightful scenes of all reality? How should those principles be entertained, that lead us to think all the visible beauty of the creation a false imaginary glare? To be plain, can you expect this scepticism of yours will not be thought extravagantly absurd by all men of sense?

Hyl. Other men may think as they please: but for your part you have nothing to reproach me with. My comfort is, you are as much a sceptic as I am.

Phil. There, Hylas, I must beg leave to differ from you.

Hyl. What! have you all along agreed to the premises, and do you now deny the conclusion, and leave me to maintain those paradoxes by myself which you led me into? This surely is not fair.

Phil. I deny that I agreed with you in those notions that led to scepticism. You indeed said, the reality of sensible things consisted in an *absolute existence* out of the minds of spirits, or distinct from their being perceived. And, pursuant to this notion of reality, you are obliged to deny sensible things any real existence:

that is, according to your own definition, you profess yourself a sceptic. But I neither said nor thought the reality of sensible things was to be defined after that manner. To me it is evident, for the reasons you allow of, that sensible things cannot exist otherwise than in a mind or spirit. Whence I conclude, not that they have no real existence, but that seeing they depend not on my thought, and have an existence distinct from being perceived by me, *there must be some other mind wherein they exist.* As sure, therefore, as the sensible world really exists, so sure is there an infinite omnipresent Spirit who contains and supports it.

Hyl. What! this is no more than I and all Christians hold; nay, and all others too who believe there is a God, and that he knows and comprehends all things.

Phil. Aye, but here lies the difference. Men commonly believe, that all things are known or perceived by God, because they believe the being of a God; whereas I, on the other side, immediately and necessarily conclude the being of a God, because all sensible things must be perceived by him.

Hyl. But so long as we all believe the same thing, what matter is it how we come by that belief?

Phil. But neither do we agree in the same opinion. For philosophers, though they acknowledge all corporeal beings to be perceived by God, yet they attribute to them an absolute subsistence distinct from their being perceived by any mind whatever, which I do not. Besides, is there no difference between saying, *There is a God, therefore he perceives all things*; and saying, *Sensible things do really exist; and if they really exist, they are necessarily perceived by an infinite mind: therefore there is an infinite mind, or God.* This furnishes you with a direct and immediate demonstration, from a most evident principle, of the *being of a God.* Divines and philosophers had proved beyond all controversy, from the beauty and usefulness of the several parts of the creation, that it was

the workmanship of God. But that, setting aside all help of astronomy and natural philosophy, all contemplation of the contrivance, order, and adjustment, of things, an infinite mind should be necessarily inferred from the bare existence of the sensible world, is an advantage peculiar to them only who have made this easy reflection: that the sensible world is that which we perceive by our several senses; and that nothing is perceived by the senses beside ideas; and that no idea or archetype of an idea can exist otherwise than in a mind. You may now, without any laborious search into the sciences, without any subtilty of reason, or tedious length of discourse, oppose and baffle the most strenuous advocate for Atheism; those miserable refuges, whether in an eternal succession of unthinking causes and effects, or in a fortuitous concourse of atoms; those wild imaginations of Vanini, Hobbes, and Spinosa; in a word, the whole system of Atheism, is it not entirely overthrown by this single reflection on the repugnancy included in supposing the whole, or any part, even the most rude and shapeless of the visible world, to exist without a mind? Let any one of those abettors of impiety but look into his own thoughts, and there try if he can conceive how so much as a rock, a desert, a chaos, or confused jumble of atoms; how any thing at all, either sensible or imaginable; can exist independent of a mind, and he need go no farther to be convinced of his folly. Can anything be fairer than to put a dispute on such an issue, and leave it to a man himself to see if he can conceive, even in thought, what he holds to be true in fact, and from a notional to allow it a real existence?

Hyl. It cannot be denied, there is something highly serviceable to religion in what you advance. But do you not think it looks very like a notion entertained by some eminent moderns, of *seeing all things in God*?

Phil. I would gladly know that opinion; pray explain it to me.

Hyl. They conceive that the soul, being immaterial, is incapable of being united with material things, so as to perceive them in themselves, but that she perceives them by her union with the substance of God, which being spiritual, is therefore purely intelligible, or capable of being the immediate object of a spirit's thought. Besides, the Divine essence contains in it perfections correspondent to each created being; and which are for that reason proper to exhibit or represent them to the mind.

Phil. I do not understand how our ideas, which are things altogether passive and inert, can be the essence, or any part (or like any part) of the essence or substance of God, who is an impassive, indivisible, pure, active being. Many more difficulties and objections there are, which occur at first view against this hypothesis; but I shall only add, that it is liable to all the absurdities of the common hypothesis, in making a created world exist otherwise than in the mind of a spirit. Beside all which it hath this peculiar to itself; that it makes that material world serve to no purpose. And if it pass for a good argument against other hypotheses in the sciences, that they suppose nature or the Divine Wisdom to make something in vain, or do that by tedious round-about methods, which might have been performed in a much more easy and compendious way, what shall we think of that hypothesis, which supposes the whole world made in vain?

Hyl. But what say you, are not you too of opinion that we see all things in God? If I mistake not, what you advance comes near it?

Phil. Few men think, yet all have opinions. Hence men's opinions are superficial and confused. It is nothing strange that tenets, which in themselves are ever so different, should nevertheless be confounded with each other by those who do not consider them attentively. I shall not therefore be surprised, if some men imagine that I run into the enthusiasm of Mallebranche,

though in truth I am very remote from it. He builds on the most abstract general ideas, which I entirely disclaim. He asserts an absolute external world, which I deny. He maintains that we are deceived by our senses, and know not the real natures or the true forms and figures of extended beings; of all which I hold the direct contrary, so that upon the whole there are no principles more fundamentally opposite than his and mine. It must be owned that I entirely agree with what the holy Scripture saith, "that in God we live, and move, and have our being." But that we see things in his essence after the manner above set forth, I am far from believing. Take here in brief my meaning. It is evident that the things I perceive are my own ideas, and that no idea can exist unless it be in a mind. Nor is it less plain that these ideas or things by me perceived, either themselves or their archetypes, exist independently of my mind, since I know myself not to be their author, it being out of my power to determine at pleasure, what particular ideas I shall be affected with upon opening my eyes or ears. They must therefore exist in some other mind, whose will it is they should be exhibited to me. The things, I say, immediately perceived, are ideas or sensations, call them which you will. But how can any idea or sensation exist in, or be produced by, any thing but a mind or spirit? This indeed is inconceivable; and to assert that which is inconceivable, is to talk nonsense: is it not?

Hyl. Without doubt.

Phil. But on the other hand, it is very conceivable that they should exist in, and be produced by, a spirit; since this is no more than I daily experience in myself, inasmuch as I perceive numberless ideas; and by an act of my will can form a great variety of them, and raise them up in my imagination: though it must be confessed, these creatures of the fancy are not altogether so distinct, so strong, vivid, and permanent, as those

perceived by my senses, which latter are called *real things*. From all which I conclude, *there is a Mind which affects me every moment with all the sensible impressions I perceive*. And from the variety, order, and manner of these, I conclude the Author of them to be *wise, powerful, and good, beyond comprehension*. Mark it well; I do not say, I see things by perceiving that which represents them in the intelligible substance of God. This I do not understand; but I say, the things by me perceived are known by the understanding, and produced by the will of an infinite Spirit. And is not all this most plain and evident? Is there any more in it, than what a little observation in our own minds, and that which passeth in them not only enableth us to conceive, but also obligeth us to acknowledge?

Hyl. I think I understand you very clearly; and own the proof you give of a Deity seems no less evident than surprising. But allowing that God is the supreme and universal Cause of all things, yet may there not be still a third nature besides spirits and ideas? May we not admit a subordinate and limited cause of our ideas? In a word, may there not for all that be *matter?*

Phil. How often must I inculcate the same thing? You allow the things immediately perceived by sense to exist no where without the mind: but there is nothing perceived by sense, which is not perceived immediately: therefore there is nothing sensible that exists without the mind. The matter therefore which you still insist on, is something intelligible, I suppose; something that may be discovered by reason, and not by sense.

Hyl. You are in the right.

Phil. Pray let me know what reasoning your belief of matter is grounded on; and what this matter is in your present sense of it.

Hyl. I find myself affected with various ideas, whereof I know I am not the cause; neither are they

the cause of themselves, or of one another, or capable of subsisting by themselves, as being altogether inactive, fleeting, dependent beings. They have therefore some cause distinct from me and them: of which I pretend to know no more, than that it is *the cause of my ideas*. And this thing, whatever it be, I call matter.

Phil. Tell me, Hylas, hath every one a liberty to change the current proper signification annexed to a common name in any language? For example, suppose a traveller should tell you, that in a certain country men might pass unhurt through the fire; and, upon explaining himself, you found he meant by the word *fire* that which others call *water*: or if he should assert that there are trees that walk upon two legs, meaning men by the term *trees*. Would you think this reasonable?

Hyl. No, I should think it very absurd. Common custom is the standard of propriety in language. And for any man to affect speaking improperly, is to pervert the use of speech, and can never serve to a better purpose than to protract and multiply disputes where there is no difference in opinion.

Phil. And doth not *matter*, in the common current acceptation of the word, signify an extended, solid, moveable, unthinking, inactive substance?

Hyl. It doth.

Phil. And hath it not been made evident, that no such substance can possibly exist? And though it should be allowed to exist, yet how can that which is *inactive* be a *cause*; or that which is *unthinking* be a *cause* of *thought*? You may indeed, if you please, annex to the word *matter* a contrary meaning to what is vulgarly received; and tell me you understand by it an unextended, thinking, active being, which is the cause of our ideas. But what else is this, than to play with words, and run into that very fault you just now condemned with so much reason? I do by no means find fault with your reasoning, in that you collect a

cause from the *phenomena:* but I deny that the cause deducible by reason can properly be termed *matter.*

Hyl. There is indeed something in what you say. But I am afraid you do not thoroughly comprehend my meaning. I would by no means be thought to deny that God or an infinite spirit is the supreme cause of all things. All I contend for, is, that subordinate to the supreme Agent there is a cause of a limited and inferior nature, which concurs in the production of our ideas, not by any act of will or spiritual efficiency, but by that kind of action which belongs to matter, viz. *motion.*

Phil. I find, you are at every turn relapsing into your old exploded conceit, of a moveable and consequently an extended substance existing without the mind. What! have you already forgot you were convinced, or are you willing I should repeat what has been said on that head? In truth this is not fair dealing in you, still to suppose the being of that which you have so often acknowledged to have no being. But not to insist farther on what has been so largely handled, I ask whether all your ideas are not perfectly passive and inert, including nothing of action in them?

Hyl. They are.

Phil. And are sensible qualities any thing else but ideas?

Hyl. How often have I acknowledged that they are not?

Phil. But is not motion a sensible quality?

Hyl. It is.

Phil. Consequently it is no action?

Hyl. I agree with you. And indeed it is very plain, that when I stir my finger it remains passive; but my will which produced the motion is active.

Phil. Now I desire to know in the first place, whether motion being allowed to be no action, you can conceive any action besides volition: and in the second place, whether to say something and conceive nothing

be not to talk nonsense: and lastly, whether having considered the premises, you do not perceive that to suppose any efficient or active cause of our ideas, other than *spirit*, is highly absurd and unreasonable?

Hyl. I give up the point entirely. But though matter may not be a cause, yet what hinders its being an *instrument* subservient to the supreme Agent in the production of our ideas?

Phil. An instrument say you! pray what may be the figure, springs, wheels, and motions, of that instrument?

Hyl. Those I pretend to determine nothing of, both the substance and its qualities being entirely unknown to me.

Phil. What! You are then of opinion, it is made up of unknown parts, that it hath unknown motions, and an unknown shape?

Hyl. I do not believe that it hath any figure or motion at all, being already convinced, that no sensible qualities can exist in an unperceiving substance.

Phil. But what notion is it possible to frame of an instrument void of all sensible qualities, even extension itself?

Hyl. I do not pretend to have any notion of it.

Phil. And what reason have you to think, this unknown, this inconceivable somewhat doth exist? Is it that you imagine God cannot act as well without it, or that you find by experience the use of some such thing, when you form ideas in your own mind?

Hyl. You are always teazing me for reasons of my belief. Pray what reasons have you not to believe it?

Phil. It is to me a sufficient reason not to believe the existence of any thing, if I see no reason for believing it. But not to insist on reasons for believing, you will not so much as let me know what it is you would have me believe, since you say you have no manner of notion of it. After all, let me entreat you to consider whether it be like a philosopher, or even like a man of common

sense, to pretend to believe you know not what, and you not why.

Hyl. Hold, Philonous. When I tell you matter is an *instrument*, I do not mean altogether nothing. It is true, I know not the particular kind of instrument; but however I have some notion of *instrument in general*, which I apply to it.

Phil. But what if it should prove that there is something, even in the most general notion of *instrument*, as taken in a distinct sense from *cause*, which makes the use of it inconsistent with the Divine attributes?

Hyl. Make that appear, and I shall give up the point.

Phil. What mean you by the general nature or notion of *instrument?*

Hyl. That which is common to all particular instruments composeth the general notion.

Phil. Is it not common to all instruments, that they are applied to the doing those things only, which cannot be performed by the mere act of our wills? Thus for instance, I never use an instrument to move my finger, because it is done by a volition. But I should use one, if I were to remove part of a rock, or tear up a tree by the roots. Are you of the same mind? Or can you shew any example where an instrument is made use of in producing an effect immediately depending on the will of the agent?

Hyl. I own I cannot.

Phil. How therefore can you suppose, that an all-perfect Spirit, on whose will all things have an absolute and immediate dependance, should need an instrument in his operations, or not needing it make use of it? Thus it seems to me that you are obliged to own the use of a lifeless inactive instrument, to be incompatible with the infinite perfection of God; that is, by your own confession, to give up the point.

Hyl. It doth not readily occur what I can answer you.

Phil. But methinks you should be ready to own the truth, when it hath been fairly proved to you. We indeed, who are beings of finite powers, are forced to make use of instruments. And the use of an instrument sheweth the agent to be limited by rules of another's prescription, and that he cannot obtain his end, but in such a way and by such conditions. Whence it seems a clear consequence, that the supreme unlimited Agent useth no tool or instrument at all. The will of an omnipotent Spirit is no sooner exerted than executed, without the application of means, which, if they are employed by inferior agents, it is not upon account of any real efficacy that is in them, or necessary aptitude to produce any effect, but merely in compliance with the laws of nature, or those conditions prescribed to them by the first Cause, who is himself above all limitation or prescription whatsoever.

Hyl. I will no longer maintain that matter is an instrument. However, I would not be understood to give up its existence neither, since notwithstanding what hath been said, it may still be an *occasion*.

Phil. How many shapes is your matter to take? Or how often must it be proved not to exist, before you are content to part with it? But to say no more of this (though by all the laws of disputation I may justly blame you for so frequently changing the signification of the principal term), I would fain know what you mean by affirming that matter is an occasion, having already denied it to be a cause. And when you have shewn in what sense you understand *occasion*, pray in the next place be pleased to shew me what reason induceth you to believe there is such an occasion of our ideas?

Hyl. As to the first point: by *occasion* I mean an inactive unthinking being, at the presence whereof God excites ideas in our minds.

Phil. And what may be the nature of that inactive, unthinking being?

Hyl. I know nothing of its nature.

Phil. Proceed then to the second point, and assign some reason why we should allow an existence to this inactive, unthinking, unknown thing?

Hyl. When we see ideas produced in our minds after an orderly and constant manner, it is natural to think they have some fixed and regular occasions, at the presence of which they are excited.

Phil. You acknowledge then God alone to be the cause of our ideas, and that he causes them at the presence of those occasions.

Hyl. That is my opinion.

Phil. Those things which you say are present to God, without doubt he perceives.

Hyl. Certainly; otherwise they could not be to him an occasion of acting.

Phil. Not to insist now on your making sense of this hypothesis, or answering all the puzzling questions and difficulties it is liable to, I only ask whether the order and regularity observable in the series of our ideas, or the course of nature, be not sufficiently accounted for by the wisdom and power of God; and whether it doth not derogate from those attributes, to suppose he is influenced, directed, or put in mind, when and what he is to act, by an unthinking substance. And, lastly, whether in case I granted all you contend for, it would make any thing to your purpose, it not being easy to conceive how the external or absolute existence of an unthinking substance, distinct from its being perceived, can be inferred from my allowing that there are certain things perceived, by the mind of God, which are to him the occasion of producing ideas in us.

Hyl. I am perfectly at a loss what to think, this notion of *occasion* seeming now altogether as groundless as the rest.

Phil. Do you not at length perceive, that in all these different acceptations of *matter*, you have been only sup-

posing you know not what, for no manner of reason, and to no kind of use?

Hyl. I freely own myself less fond of my notions, since they have been so accurately examined. But still, methinks, I have some confused perception that there is such a thing as *matter*.

Phil. Either you perceive the being of matter immediately, or mediately. If immediately, pray inform me by which of the senses you perceive it. If mediately, let me know by what reasoning it is inferred from those things which you perceive immediately. So much for the perception. Then for the matter itself, I ask whether it is object, *substratum*, cause, instrument, or occasion? You have already pleaded for each of these, shifting your notions, and making matter to appear some times in one shape, then in another. And what you have offered hath been disapproved and rejected by yourself. If you have any thing new to advance, I would gladly hear it.

Hyl. I think I have already offered all I had to say on those heads. I am at a loss what more to urge.

Phil. And yet you are loath to part with your old prejudice! But to make you quit it more easily, I desire that, beside what has been hitherto suggested, you will farther consider whether, upon supposition that matter exists, you can possibly conceive how you should be affected by it? Or supposing it did not exist, whether it be not evident you might for all that be affected with the same ideas you now are, and consequently have the very same reasons to believe its existence that you now can have?

Hyl. I acknowledge it is possible we might perceive all things just as we do now, though there was no matter in the world; neither can I conceive, if there be matter, how it should produce any idea in our minds. And I do farther grant, you have entirely satisfied me, that it is impossible there should be such a thing as mat-

ter in any of the foregoing acceptations. But still I cannot help supposing that there is *matter* in some sense or other. What that is I do not indeed pretend to determine.

Phil. I do not expect you should define exactly the nature of that unknown being. Only be pleased to tell me, whether it is a substance: and if so whether you can suppose a substance without accidents; or in case you suppose it to have accidents or qualities, I desire you will let me know what those qualities are, at least what is meant by matter's supporting them?

Hyl. We have already argued on those points. I have no more to say to them. But to prevent any farther questions, let me tell you, I at present understand by *matter* neither substance nor accident, thinking nor extended being, neither cause, instrument, nor occasion, but something entirely unknown, distinct from all these.

Phil. It seems then you include in your present notion of matter, nothing but the general abstract idea of *entity*.

Hyl. Nothing else, save only that I superadd to this general idea the negation of all those particular things, qualities, or ideas, that I perceive, imagine, or in any wise apprehend.

Phil. Pray where do you suppose this unknown matter to exist?

Hyl. Oh Philonous! now you think you have entangled me; for if I say it exists in place, then you will infer that it exists in the mind, since it is agreed, that place or extension exists only in the mind: but I am not ashamed to own my ignorance. I know not where it exists, only I am sure it exists not in place. There is a negative answer for you: and you must expect no other to all the questions you put for the future about matter.

Phil. Since you will not tell me where it exists, be pleased to inform me after what manner you suppose it to exist, or what you mean by its *existence?*

Hyl. It neither thinks nor acts, neither perceives nor is perceived.

Phil. But what is there positive in your abstracted notion of its existence?

Hyl. Upon a nice observation, I do not find I have any positive notion or meaning at all. I tell you again I am not ashamed to own my ignorance. I know not what is meant by its *existence*, or how it exists.

Phil. Continue, good Hylas, to act the same ingenuous part, and tell me sincerely whether you can frame a distinct idea of entity in general, prescinded from and exclusive of all thinking and corporeal beings, all particular things whatsoever.

Hyl. Hold, let me think a little——I profess, Philonous, I do not find that I can. At first glance methought I had some dilute and airy notion of pure entity in abstract; but upon closer attention it hath quite vanished out of sight. The more I think on it, the more am I confirmed in my prudent resolution of giving none but negative answers, and not pretending to the least degree of any positive knowledge or conception of matter, its *where*, its *how*, its *entity*, or any thing belonging to it.

Phil. When therefore you speak of the existence of matter, you have not any notion in your mind?

Hyl. None at all.

Phil. Pray tell me if the case stands not thus: at first, from a belief of material substance, you would have it that the immediate objects existed without the mind; then that their archetypes; then causes; next instruments; then occasions: lastly, *something in general*, which being interpreted proves *nothing*. So matter comes to nothing. What think you, Hylas, is not this a fair summary of your whole proceeding?

Hyl. Be that as it will, yet I still insist upon it, that our not being able to conceive a thing, is no argument against its existence.

Phil. That from a cause, effect, operation, sign, or other circumstance, there may reasonably be inferred the existence of a thing not immediately perceived, and that it were absurd for any man to argue against the existence of that thing, from his having no direct and positive notion of it, I freely own. But where there is nothing of all this; where neither reason nor revelation induces us to believe the existence of a thing; where we have not even a relative notion of it; where an abstraction is made from perceiving and being perceived, from spirit and idea: lastly, where there is not so much as the most inadequate or faint idea pretended to: I will not indeed thence conclude against the reality of any notion or existence of any thing: but my inference shall be, that you mean nothing at all: that you employ words to no manner of purpose, without any design or signification whatsoever. And I leave it to you to consider how mere jargon should be treated.

Hyl. To deal frankly with you, Philonous, your arguments seem in themselves unanswerable, but they have not so great an effect on me as to produce that entire conviction, that hearty acquiescence, which attends demonstration. I find myself still relapsing into an obscure surmise of I know not what, *matter*.

Phil. But are you not sensible, Hylas, that two things must concur to take away all scruple, and work a plenary assent in the mind? Let a visible object be set in never so clear a light, yet if there is any imperfection in the sight, or if the eye is not directed towards it, it will not be distinctly seen. And though a demonstration be never so well grounded and fairly proposed, yet if there is withal a stain of prejudice, or a wrong bias on the understanding, can it be expected on a sudden to perceive clearly and adhere firmly to the truth? No, there is need of time and pains: the attention must be awakened and detained by a frequent repetition of

the same thing placed oft in the same, oft in different lights. I have said it already, and find I must still repeat and inculcate, that it is an unaccountable licence you take in pretending to maintain you know not what, for you know not what reason, to you know not what purpose. Can this be paralleled in any art or science, any sect or profession of men? Or is there any thing so barefacedly groundless and unreasonable to be met with even in the lowest of common conversation? But perhaps you will still say, matter may exist, though at the same time you neither know what is meant by *matter*, or by its *existence*. This indeed is surprising, and the more so because it is altogether voluntary, you not being led to it by any one reason; for I challenge you to shew me that thing in nature which needs matter to explain or account for it.

Hyl. The reality of things cannot be maintained without supposing the existence of matter. And is not this, think you, a good reason why I should be earnest in its defence?

Phil. The reality of things! What things, sensible or intelligible?

Hyl. Sensible things.

Phil. My glove for example?

Hyl. That or any other thing perceived by the senses.

Phil. But to fix on some particular thing; is it not a sufficient evidence to me of the existence of this *glove*, that I see it, and feel it, and wear it? Or if this will not do, how is it possible I should be assured of the reality of this thing, which I actually see in this place, by supposing that some unknown thing, which I never did or can see, exists after an unknown manner, in an unknown place, or in no place at all? How can the supposed reality of that which is intangible, be a proof that any thing tangible really exists? Or of that which is invisible, that any visible thing, or in general

of any thing which is imperceptible, that a perceptible exists? Do but explain this, and I shall think nothing too hard for you.

Hyl. Upon the whole, I am content to own the existence of matter is highly improbable; but the direct and absolute impossibility of it does not appear to me.

Phil. But granting matter to be possible, yet upon that account merely it can have no more claim to existence, than a golden mountain or a centaur.

Hyl. I acknowledge it; but still you do not deny it is possible; and that which is possible, for aught you know, may actually exist.

Phil. I deny it to be possible; and have, if I mistake not, evidently proved, from your own concessions, that it is not. In the common sense of the word *matter*, is there any more implied, than an extended, solid, figured, moveable substance existing without the mind? And have not you acknowledged, over and over, that you have seen evident reason for denying the possibility of such a substance?

Hyl. True, but that is only one sense of the term *matter*.

Phil. But is it not the only proper genuine received sense? and if matter in such a sense be proved impossible, may it not be thought with good grounds absolutely impossible? Else how could any thing be proved impossible? Or, indeed, how could there be any proof at all one way or other, to a man who takes the liberty to unsettle and change the common signification of words?

Hyl. I thought philosophers might be allowed to speak more accurately than the vulgar, and were not always confined to the common acceptation of a term.

Phil. But this now mentioned is the common received sense among philosophers themselves. But not to insist on that, have you not been allowed to take matter in what sense you pleased? And have you not used

this privilege in the utmost extent, sometimes entirely changing, at others, leaving out or putting into the definition of it whatever, for the present, best served your design, contrary to all the known rules of reason and logic? And hath not this shifting, unfair method of yours, spun out our dispute to an unnecessary length; matter having been particularly examined, and by your own confession refuted in each of those senses? And can any more be required to prove the absolute impossibility of a thing, than the proving it impossible in every particular sense, that either you or any one else understands it in?

Hyl. But I am not so thoroughly satisfied that you have proved the impossibility of matter in the last most obscure abstracted and indefinite sense.

Phil. When is a thing shewn to be impossible?

Hyl. When a repugnancy is demonstrated between the ideas comprehended in its definition.

Phil. But where there are no ideas, there no repugnancy can be demonstrated between ideas?

Hyl. I agree with you.

Phil. Now in that which you call the obscure indefinite sense of the word *matter*, it is plain, by your own confession, there was included no idea at all, no sense except an unknown sense, which is the same thing as none. You are not, therefore, to expect I should prove a repugnancy between ideas where there are no ideas; or the impossibility of matter taken in an *unknown* sense, that is, no sense at all. My business was only to shew you meant *nothing*; and this you were brought to own. So that in all your various senses, you have been shewed either to mean nothing at all, or if any thing, an absurdity. And if this be not sufficient to prove the impossibility of a thing, I desire you will let me know what is.

Hyl. I acknowledge you have proved that matter is impossible; nor do I see what more can be said in de-

fence of it. But at the same time that I give up this, I suspect all my other notions. For surely none could be more seemingly evident than this once was: and yet it now seems as false and absurd as ever it did true before. But I think we have discussed the point sufficiently for the present. The remaining part of the day I would willingly spend, in running over in my thoughts the several heads of this morning's conversation, and to morrow shall be glad to meet you here again about the same time.

Phil. I will not fail to attend you.

THE

THIRD DIALOGUE.

PHILONOUS.

TELL me, Hylas, what are the fruits of yesterday's meditation? Hath it confirmed you in the same mind you were in at parting? or have you since seen cause to change your opinion?

Hylas. Truly my opinion is, that all our opinions are alike vain and uncertain. What we approve to-day, we condemn to-morrow. We keep a stir about knowledge, and spend our lives in the pursuit of it, when, alas! we know nothing all the while: nor do I think it possible for us ever to know any thing in this life. Our faculties are too narrow and too few. Nature certainly never intended us for speculation.

Phil. What! say you we can know nothing, Hylas?

Hyl. There is not that single thing in the world, whereof we can know the real nature, or what it is in itself.

Phil. Will you tell me I do not really know what fire or water is?

Hyl. You may indeed know that fire appears hot, and water fluid: but this is no more than knowing what sensations are produced in your own mind, upon the application of fire and water to your organs of sense. Their internal constitution, their true and real nature, you are utterly in the dark as to *that*.

Phil. Do I not know this to be a real stone that I stand on, and that which I see before my eyes to be a real tree?

Hyl. Know? No, it is impossible you or any man alive should know it. All you know is, that you have such a certain idea or appearance in your own mind. But what is this to the real tree or stone? I tell you, that colour, figure, and hardness, which you perceive, are not the real natures of those things, or in the least like them. The same may be said of all other real things or corporeal substances which compose the world. They have none of them any thing of themselves, like those sensible qualities by us perceived. We should not therefore pretend to affirm or know any thing of them, as they are in their own nature.

Phil. But surely, Hylas, I can distinguish gold, for example, from iron: and how could this be, if I knew not what either truly was?

Hyl. Believe me, Philonous, you can only distinguish between your own ideas. That yellowness, that weight, and other sensible qualities, think you they are really in the gold? They are only relative to the senses, and have no absolute existence in nature. And in pretending to distinguish the species of real things, by the appearances in your mind, you may perhaps act as wisely as he that should conclude two men were of a different species, because their clothes were not of the same colour.

Phil. It seems, then, we are altogether put off with the appearances of things, and those false ones too. The very meat I eat, and the cloth I wear, have nothing in them like what I see and feel.

Hyl. Even so.

Phil. But is it not strange the whole world should be thus imposed on, and so foolish as to believe their senses? And yet I know not how it is, but men eat, and drink, and sleep, and perform all the offices of life as comfortably and conveniently, as if they really knew the things they are conversant about.

Hyl. They do so: but you know ordinary practice

does not require a nicety of speculative knowledge. Hence the vulgar retain their mistakes, and for all that, make a shift to bustle through the affairs of life. But philosophers know better things.

Phil. You mean, they know that they *know nothing*.

Hyl. That is the very top and perfection of human knowledge.

Phil. But are you all this while in earnest, Hylas; and are you seriously persuaded that you know nothing real in the world? Suppose you are going to write, would you not call for pen, ink, and paper, like another man; and do you not know what it is you call for?

Hyl. How often must I tell you, that I know not the real nature of any one thing in the universe? I may indeed upon occasion make use of pen, ink, and paper. But what any one of them is in its own true nature, I declare positively I know not. And the same is true with regard to every other corporeal thing. And, what is more, we are not only ignorant of the true and real nature of things, but even of their existence. It cannot be denied that we perceive such certain appearances or ideas; but it cannot be concluded from thence that bodies really exist. Nay, now I think on it, I must agreeably to my former concessions farther declare, that it is impossible any real corporeal thing should exist in nature.

Phil. You amaze me! Was ever any thing more wild and extravagant than the notions you now maintain! And is it not evident you are led into all these extravagances by the belief of *material substance?* This makes you dream of those unknown natures in every thing. It is this occasions your distinguishing between the reality and sensible appearances of things. It is to this you are indebted for being ignorant of what every body else knows perfectly well. Nor is this all: you are not only ignorant of the true nature of every thing, but you know not whether any thing really exists, or whether there are any true natures at all; forasmuch as you

attribute to your material beings an absolute or external existence, wherein you suppose their reality consists. And as you are forced in the end to acknowledge such an existence means either a direct repugnancy, or nothing at all, it follows, that you are obliged to pull down your own hypothesis of material substance, and positively to deny the real existence of any part of the universe. And so you are plunged into the deepest and most deplorable *scepticism* that ever man was. Tell me, Hylas, is it not as I say?

Hyl. I agree with you. *Material substance* was no more than an hypothesis, and a false and groundless one too. I will no longer spend my breath in defence of it. But whatever hypothesis you advance, or whatsoever scheme of things you introduce in its stead, I doubt not it will appear every whit as false: let me but be allowed to question you upon it. That is, suffer me to serve you in your own kind, and I warrant it shall conduct you through as many perplexities and contradictions, to the very same state of scepticism that I myself am in at present.

Phil. I assure you, Hylas, I do not pretend to frame any hypothesis at all. I am of a vulgar cast, simple enough to believe my senses, and leave things as I find them. To be plain, it is my opinion, that the real things are those very things I see and feel, and perceive by my senses. These I know, and finding they answer all the necessities and purposes of life, have no reason to be solicitous about any other unknown beings. A piece of sensible bread, for instance, would stay my stomach better than ten thousand times as much of that insensible, unintelligible, real bread you speak of. It is likewise my opinion, that colours and other sensible qualities are on the objects. I cannot for my life help thinking that snow is white, and fire hot. You indeed, who by *snow* and *fire* mean certain external, unperceived, unperceiving substances, are in the right to deny whiteness or

heat to be affections inherent in them. But I, who understand by those words the things I see and feel, am obliged to think like other folks. And as I am no sceptic with regard to the nature of things, so neither am I as to their existence. That a thing should be really perceived by my senses, and at the same time not really exist, is to me a plain contradiction; since I cannot prescind or abstract, even in thought, the existence of a sensible thing from its being perceived. Wood, stones, fire, water, flesh, iron, and the like things, which I name and discourse of, are things that I know. And I should not have known them, but that I perceived them by my senses; and things perceived by the senses are immediately perceived; and things immediately perceived are ideas; and ideas cannot exist without the mind; their existence therefore consists in being perceived; when therefore they are actually perceived, there can be no doubt of their existence. Away then with all that scepticism, all those ridiculous philosophical doubts. What a jest is it for a philosopher to question the existence of sensible things, till he hath it proved to him from the veracity of God; or to pretend our knowledge in this point falls short of intuition or demonstration! I might as well doubt of my own being, as of the being of those things I actually see and feel.

Hyl. Not so fast, Philonous: you say you cannot conceive how sensible things should exist without the mind. Do you not?

Phil. I do.

Hyl. Supposing you were annihilated, cannot you conceive it possible that things perceivable by sense may still exist?

Phil. I can; but then it must be in another mind. When I deny sensible things an existence out of the mind, I do not mean my mind in particular, but all minds. Now it is plain they have an existence exterior to my mind, since I find them by experience to be independent

of it. There is therefore some other mind wherein they exist, during the intervals between the times of my perceiving them: as likewise they did before my birth, and would do after my supposed annihilation. And as the same is true, with regard to all other finite created spirits, it necessarily follows, there is an *omnipresent eternal Mind*, which knows and comprehends all things, and exhibits them to our view in such a manner, and according to such rules, as he himself hath ordained, and are by us termed the *laws of nature*.

Hyl. Answer me, Philonous. Are all our ideas perfectly inert beings? Or have they any agency included in them?

Phil. They are altogether passive and inert.

Hyl. And is not God an agent, a being purely active?

Phil. I acknowledge it.

Hyl. No idea therefore can be like unto, or represent the nature of, God.

Phil. It cannot.

Hyl. Since therefore you have no idea of the mind of God, how can you conceive it possible, that things should exist in his mind? Or, if you can conceive the mind of God without having an idea of it, why may not I be allowed to conceive the existence of matter, notwithstanding that I have no idea of it?

Phil. As to your first question; I own I have properly no idea, either of God or any other spirit; for these being active, cannot be represented by things perfectly inert, as our ideas are. I do nevertheless know, that I who am a spirit or thinking substance, exist as certainly, as I know my ideas exist. Farther, I know what I mean by the terms *I* and *myself*; and I know this immediately, or intuitively, though I do not perceive it as I perceive a triangle, a colour, or a sound. The mind, spirit, or soul, is that indivisible unextended thing, which thinks, acts, and perceives. I say *indivisible*, because unextended; and *unextended*, because ex-

tended, figured, moveable things, are ideas; and that which perceives ideas, which thinks and wills, is plainly itself no idea, nor like an idea. Ideas are things inactive, and perceived: and spirits a sort of beings altogether different from them. I do not therefore say my soul is an idea, or like an idea. However, taking the word *idea* in a large sense, my soul may be said to furnish me with an idea, that is, an image, or likeness of God, though indeed extremely inadequate. For all the notion I have of God, is obtained by reflecting on my own soul heightening its powers, and removing its imperfections. I have therefore, though not an inactive idea, yet in myself some sort of an active thinking image of the Deity. And though I perceive him not by sense, yet I have a notion of him, or know him by reflection and reasoning. My own mind and my own ideas I have an immediate knowledge of; and by the help of these, do mediately apprehend the possibility of the existence of other spirits and ideas. Farther, from my own being, and from the dependency I find in myself and my ideas, I do by an act of reason, necessarily infer the existence of a God, and of all created things in the mind of God. So much for your first question. For the second: I suppose by this time you can answer it yourself. For you neither perceive matter objectively, as you do an inactive being or idea, nor know it, as you do yourself by a reflex act: neither do you mediately apprehend it by similitude of the one or the other: nor yet collect it by reasoning from that which you know immediately. All which makes the case of *matter* widely different from that of the *Deity*.

Hyl. You say your own soul supplies you with some sort of an idea or image of God. But at the same time you acknowledge you have, properly speaking, no idea of your own soul. You even affirm that spirits are a sort of beings altogether different from ideas. Consequently that no idea can be like a spirit. We have

therefore no idea of any spirit. You admit nevertheless that there is spiritual substance, although you have no idea of it; while you deny there can be such a thing as material substance, because you have no notion or idea of it. Is this fair dealing? To act consistently, you must either admit matter or reject spirit. What say you to this?

Phil. I say in the first place, that I do not deny the existence of material substance, merely because I have no notion of it, but because the notion of it is inconsistent, or in other words, because it is repugnant that there should be a notion of it. Many things, for aught I know, may exist, whereof neither I nor any other man hath or can have any idea or notion whatsoever. But then those things must be possible, that is, nothing inconsistent must be included in their definition. I say, secondly, that although we believe things to exist, which we do not perceive; yet we may not believe that any particular thing exists, without some reason for such belief: but I have no reason for believing the existence of matter. I have no immediate intuition thereof: neither can I mediately from my sensations, ideas, notions, actions, or passions, infer an unthinking, unperceiving, inactive substance, either by probable deduction, or necessary consequence. Whereas the being of myself, that is, my own soul, mind, or thinking principle, I evidently know by reflection. You will forgive me if I repeat the same things in answer to the same objections. In the very notion or definition of material substance, there is included a manifest repugnance and inconsistency. But this cannot be said of the notion of spirit. That ideas should exist in what doth not perceive, or be produced by what doth not act, is repugnant. But it is no repugnancy to say, that a perceiving thing should be the subject of ideas, or an active thing the cause of them. It is granted we have neither an immediate evidence nor a demonstrative knowledge of the existence of other

finite spirits; but it will not thence follow that such spirits are on a foot with material substances: if to suppose the one be inconsistent, and it be not inconsistent to suppose the other; if the one can be inferred by no argument, and there is a probability for the other; if we see signs and effects indicating distinct finite agents like ourselves, and see no sign or symptom whatever that leads to a rational belief of matter. I say lastly, that I have a notion of spirit, though I have not, strictly speaking, an idea of it. I do not perceive it as an idea or by means of an idea, but know it by reflection.

Hyl. Notwithstanding all you have said, to me it seems, that according to your own way of thinking, and in consequence of your own principles, it should follow that you are only a system of floating ideas, without any substance to support them. Words are not to be used without a meaning. And as there is no more meaning in spiritual substance than in material substance, the one is to be exploded as well as the other.

Phil. How often must I repeat, that I know or am conscious of my own being; and that I myself am not my ideas, but somewhat else, a thinking active principle that perceives, knows, wills, and operates about ideas. I know that I, one and the same self, perceive both colours and sounds: that a colour cannot perceive a sound, nor a sound a colour: that I am therefore one individual principle, distinct from colour and sound; and, for the same reason, from all other sensible things and inert ideas. But I am not in like manner conscious either of the existence or essence of matter. On the contrary, I know that nothing inconsistent can exist, and that the existence of matter implies an inconsistency. Farther, I know what I mean, when I affirm that there is a spiritual substance or support of ideas, that is, that a spirit knows and perceives ideas. But I do not know what is meant, when it is said, that an unperceiving substance hath inherent in it and supports either ideas

or the archetypes of ideas. There is therefore upon the whole, no parity of case between spirit and matter.

Hyl. I own myself satisfied in this point. But do you in earnest think, the real existence of sensible things consists in their being actually perceived? If so; how comes it that all mankind distinguish between them? Ask the first man you meet, and he shall tell you, *to be perceived* is one thing, and *to exist* is another.

Phil. I am content, Hylas, to appeal to the common sense of the world for the truth of my notion. Ask the gardener, why he thinks yonder cherry-tree exists in the garden, and he shall tell you, because he sees and feels it; in a word, because he perceives it by his senses. Ask him, why he thinks an orange-tree not to be there, and he shall tell you, because he does not perceive it. What he perceives by sense, that he terms a real being, and saith it *is*, or *exists*; but that which is not perceivable, the same, he saith, hath no being.

Hyl. Yes, Philonous, I grant the existence of a sensible thing consists in being perceivable, but not in being actually perceived.

Phil. And what is perceivable but an idea? And can an idea exist without being actually perceived? These are points long since agreed between us.

Hyl. But be your opinion never so true, yet surely you will not deny it is shocking, and contrary to the common sense of men. Ask the fellow, whether yonder tree hath an existence out of his mind: what answer think you he would make?

Phil. The same that I should myself, to wit, that it doth exist out of his mind. But then to a Christian it cannot surely be shocking to say, the real tree existing without his mind is truly known and comprehended by (that is, *exists in*) the infinite mind of God. Probably he may not at first glance be aware of the direct and immediate proof there is of this, inasmuch as the very being of a tree, or any other sensible thing, implies a

mind wherein it is. But the point itself he cannot deny. The question between the Materialists and me is not, whether things have a real existence out of the mind of this or that person, but whether they have an absolute existence, distinct from being perceived by God, and exterior to all minds. This indeed some heathens and philosophers have affirmed, but whoever entertains notions of the Deity suitable to the holy Scriptures, will be of another opinion.

Hyl. But according to your notions, what difference is there between real things, and chimeras formed by the imagination, or the visions of a dream, since they are all equally in the mind?

Phil. The ideas formed by the imagination are faint and indistinct; they have, besides, an entire dependence on the will. But the ideas perceived by sense, that is, real things, are more vivid and clear, and being imprinted on the mind by a spirit distinct from us, have not the like dependence on our will. There is therefore no danger of confounding these with the foregoing: and there is as little of confounding them with the visions of a dream, which are dim, irregular, and confused. And though they should happen to be never so lively and natural, yet by their not being connected, and of a piece with the preceding and subsequent transactions of our lives, they might easily be distinguished from realities. In short, by whatever method you distinguish *things* from *chimeras* on your own scheme, the same, it is evident, will hold also upon mine. For it must be, I presume, by some perceived difference, and I am not for depriving you of any one thing that you perceive.

Hyl. But still, Philonous, you hold, there is nothing in the world but spirits and ideas. And this, you must needs acknowledge, sounds very oddly.

Phil. I own the word *idea*, not being commonly used for *thing*, sounds something out of the way. My reason

for using it was, because a necessary relation to the mind is understood to be implied by that term; and it is now commonly used by philosophers, to denote the immediate objects of the understanding. But however oddly the proposition may sound in words, yet it includes nothing so very strange or shocking in its sense, which in effect amounts to no more than this, to wit, that there are only things perceiving, and things perceived; or that every unthinking being is necessarily, and from the very nature of its existence, perceived by some mind; if not by a finite created mind, yet certainly by the infinite mind of God, in whom "we live, and move, and have our being." Is this as strange as to say, the sensible qualities are not on the objects: or that we cannot be sure of the existence of things, or know any thing of their real natures, though we both see and feel them, and perceive them by all our senses?

Hyl. And in consequence of this, must we not think there are no such things as physical or corporeal causes; but that a spirit is the immediate cause of all the phenomena in nature? Can there be any thing more extravagant than this?

Phil. Yes, it is infinitely more extravagant to say, a thing which is inert, operates on the mind, and which is unperceiving, is the cause of our perceptions. Besides, that which to you, I know not for what reason, seems so extravagant, is no more than the holy Scriptures assert in a hundred places. In them God is represented as the sole and immediate author of all those effects, which some heathens and philosophers are wont to ascribe to nature, matter, fate, or the like unthinking principle. This is so much the constant language of Scripture, that it were needless to confirm it by citations.

Hyl. You are not aware, Philonous, that in making God the immediate author of all the motions in nature, you make him the author of murder, sacrilege, adultery, and the like heinous sins.

Phil. In answer to that, I observe, first, that the imputation of guilt is the same, whether a person commits an action with or without an instrument. In case therefore you suppose God to act by the mediation of an instrument, or occasion, called *matter*, you as truly make him the author of sin as I, who think him the immediate agent in all those operations vulgarly ascribed to nature. I farther observe, that sin or moral turpitude doth not consist in the outward physical action or motion, but in the internal deviation of the will from the laws of reason and religion. This is plain, in that the killing an enemy in a battle, or putting a criminal legally to death, is not thought sinful, though the outward act be the very same with that in the case of murder. Since therefore sin doth not consist in the physical action, the making God an immediate cause of all such actions, is not making him the author of sin. Lastly, I have no where said that God is the only agent who produces all the motions in bodies. It is true, I have denied there are any other agents besides spirits; but this is very consistent with allowing to thinking rational beings, in the production of motions, the use of limited powers, ultimately indeed derived from God, but immediately under the direction of their own wills, which is sufficient to entitle them to all the guilt of their actions.

Hyl. But the denying matter, Philonous, or corporeal substance; there is the point. You can never persuade me that this is not repugnant to the universal sense of mankind. Were our dispute to be determined by most voices, I am confident you would give up the point, without gathering the votes.

Phil. I wish both our opinions were fairly stated and submitted to the judgment of men, who had plain common sense, without the prejudices of a learned education. Let me be represented as one who trusts his senses, who thinks he knows the things he sees and feels, and entertains no doubts, of their existence; and

you fairly set forth with all your doubts, your paradoxes, and your scepticism, about you, and I shall willingly acquiesce in the determination of any indifferent person. That there is no substance wherein ideas can exist beside spirit, is to me evident. And that the objects immediately perceived are ideas, is on all hands agreed. And that sensible qualities are objects immediately perceived, no one can deny. It is therefore evident there can be no *substratum* of those qualities but spirit, in which they exist, not by way of mode or property, but as a thing perceived in that which perceives it. I deny therefore that there is any unthinking *substratum* of the objects of sense, and in that acceptation that there is any material substance. But if by *material substance* is meant only sensible body, that which is seen and felt (and the unphilosophical part of the world, I dare say, mean no more), then I am more certain of matter's existence than you, or any other philosopher pretend to be. If there be any thing which makes the generality of mankind averse from the notions I espouse, it is a misapprehension that I deny the reality of sensible things: but as it is you who are guilty of that and not I, it follows that in truth their aversion is against your notions, and not mine. I do therefore assert that I am as certain as of my own being, that there are bodies or corporeal substances (meaning the things I perceive by my senses), and that granting this, the bulk of mankind will take no thought about, nor think themselves at all concerned in the fate of those unknown natures, and philosophical quiddities, which some men are so fond of.

Hyl. What say you to this? Since, according to you, men judge of the reality of things by their senses, how can a man be mistaken in thinking the moon a plain lucid surface, about a foot in diameter; or a square tower, seen at a distance, round; or an oar, with one end in the water, crooked?

Phil. He is not mistaken with regard to the ideas he actually perceives; but in the infreences he makes from his present perceptions. Thus in the case of the oar, what he immediately perceives by sight is certainly crooked; and so far he is in the right. But if he thence conclude, that upon taking the oar out of the water he shall perceive the same crookedness; or that it would affect his touch, as crooked things are wont to do: in that he is mistaken. In like manner, if he shall conclude from what he perceives in one station, that in case he advances towards the moon or tower, he should still be affected with the like ideas, he is mistaken. But his mistake lies not in what he perceives immediately and at present (it being a manifest contradiction to suppose he should err in respect of that), but in the wrong judgment he makes concerning the ideas he apprehends to be connected with those immediately perceived: or concerning the ideas that, from what he perceives at present, he imagines would be perceived in other circumstances. The case is the same with regard to the Copernican system. We do not here perceive any motion of the earth: but it were erroneous thence to conclude, that in case we were placed at as great a distance from that, as we are now from the other planets, we should not then perceive its motion.

Hyl. I understand you; and must needs own you say things plausible enough: but give me leave to put you in mind of one thing. Pray, Philonous, were you not formerly as positive that matter existed, as you are now that it does not?

Phil. I was. But here lies the difference. Before, my positiveness was founded, without examination, upon prejudice; but now, after inquiry, upon evidence.

Hyl. After all, it seems our dispute is rather about words than things. We agree in the thing, but differ in the name. That we are affected with ideas from

without is evident; and it is no less evident, that there must be (I will not say archetypes, but) powers without the mind, corresponding to those ideas. And as these powers cannot subsist by themselves, there is some subject of them necessarily to be admitted, which I call *matter*, and you call *spirit*. This is all the difference.

Phil. Pray, Hylas, is that powerful being, or subject of powers, extended?

Hyl. It hath not extension; but it hath the power to raise in you the idea of extension.

Phil. It is therefore itself unextended?

Hyl. I grant it.

Phil. Is it not also active?

Hyl. Without doubt: otherwise, how could we attribute powers to it?

Phil. Now let me ask you two questions: *First*, whether it be agreeable to the usage either of philosophers or others, to give the name *matter* to an unextended active being? And, *Secondly*, whether it be not ridiculously absurd to misapply names contrary to the common use of language?

Hyl. Well then, let it not be called matter, since you will have it so, but some *third nature* distinct from matter and spirit. For what reason is there why you should call it spirit? Does not the notion of spirit imply, that it is thinking as well as active and unextended?

Phil. My reason is this: because I have a mind to have some notion of meaning in what I say: but I have no notion of any action distinct from volition, neither can I conceive volition to be any where but in a spirit: therefore when I speak of an active being, I am obliged to mean a spirit. Beside, what can be plainer than that a thing which hath no ideas in itself, cannot impart them to me; and if it hath ideas, surely it must be a spirit. To make you comprehend the point still more

clearly if it be possible: I assert as well as you, that since we are affected from without, we must allow powers to be without in a being distinct from ourselves. So far we are agreed. But then we differ as to the kind of this powerful being. I will have it to be spirit, you matter, or I know not what (I may add too, you know not what) third nature. Thus I prove it to be spirit. From the effects I see produced, I conclude there are actions; and because actions, volitions; and because there are volitions, there must be a will. Again, the things I perceive must have an existence, they or their archetypes, out of my mind: but being ideas, neither they nor their archetypes can exist otherwise than in an understanding: there is therefore an understanding. But will and understanding constitute in the strictest sense a mind or spirit. The powerful cause therefore of my ideas, is in strict propriety of speech a *spirit*.

Hyl. And now I warrant you think you have made the point very clear, little suspecting that what you advance leads directly to a contradiction. Is it not an absurdity to imagine any imperfection in God?

Phil. Without doubt.

Hyl. To suffer pain is an imperfection?

Phil. It is.

Hyl. Are we not sometimes affected with pain and uneasiness by some other being?

Phil. We are.

Hyl. And have you not said that being is a spirit, and is not that spirit God?

Phil. I grant it.

Hyl. But you have asserted, that whatever ideas we perceive from without, are in the mind, which affects us. The ideas, therefore, of pain and uneasiness, are in God; or, in other words, God suffers pain: that is to say, there is an imperfection in the Divine nature, which, you acknowledged, was absurd. So you are caught in a plain contradiction.

Phil. That God knows or understands all things, and that he knows, among other things, what pain is, even every sort of painful sensation, and what it is for his creatures to suffer pain, I make no question. But that God, though he knows, and sometimes causes painful sensations in us, can himself suffer pain, I positively deny. We who are limited and dependent spirits, are liable to impressions of sense, the effects of an external agent, which being produced against our wills, are sometimes painful and uneasy. But God, whom no external being can affect, who perceives nothing by sense as we do, whose will is absolute and independent, causing all things, and liable to be thwarted or resisted by nothing; it is evident, such a being as this can suffer nothing, nor be affected with any painful sensation, or indeed any sensation at all. We are chained to a body, that is to say, our perceptions are connected with corporeal motions. By the law of our nature we are affected upon every alteration in the nervous parts of our sensible body: which sensible body, rightly considered, is nothing but a complexion of such qualities or ideas, as have no existence distinct from being perceived by a mind: so that this connexion of sensations with corporeal motions, means no more than a correspondence in the order of nature between two sets of ideas, or things immediately perceivable. But God is a pure spirit, disengaged from all such sympathy or natural ties. No corporeal motions are attended with the sensations of pain or pleasure in his mind. To know every thing knowable is certainly a perfection; but to endure, or suffer, or feel any thing by sense, is an imperfection. The former, I say, agrees to God, but not the latter. God knows or hath ideas; but his ideas are not conveyed to him by sense, as ours are. Your not distinguishing where there is so manifest a difference, makes you fancy you see an absurdity where there is none.

Hyl. But all this while you have not considered,

that the quantity of matter hath been demonstrated to be proportioned to the gravity of bodies. And what can withstand demonstration?

Phil. Let me see how you demonstrate that point.

Hyl. I lay it down for a principle, that the moments or quantities of motion in bodies, are in a direct compounded reason of the velocities and quantities of matter contained in them. Hence, where the velocities are equal, it follows, the moments are directly as the quantity of matter in each. But it is found by experience, that all bodies (bating the small inequalities, arising from the resistance of the air) descend with an equal velocity; the motion therefore of descending bodies, and consequently their gravity, which is the cause or principle of that motion, is proportional to the quantity of matter: which was to be demonstrated.

Phil. You lay it down as a self-evident principle, that the quantity of motion in any body, is proportional to the velocity and *matter* taken together; and this is made use of to prove a proposition, from whence the existence of *matter* is inferred. Pray is not this arguing in a circle?

Hyl. In the premise I only mean, that the motion is proportional to the velocity, jointly with the extension and solidity.

Phil. But allowing this to be true, yet it will not thence follow, that gravity is proportional to *matter*, in your philosophic sense of the word; except you take it for granted, that unknown *substratum*, or whatever else you call it, is proportional to those sensible qualities; which to suppose, is plainly begging the question. That there is magnitude and solidity, or resistance, perceived by sense, I readily grant; as likewise, that gravity may be proportional to those qualities, I will not dispute. But that either these qualities as perceived by us, or the powers producing them, do exist in a *material substra-*

tum; this is what I deny, and you indeed affirm, but, notwithstanding your demonstration, have not yet proved.

Hyl. I shall insist no longer on that point. Do you think, however, you shall persuade me the natural philosophers have been dreaming all this while? Pray what becomes of all their hypotheses and explications of the phenomena, which suppose the existence of matter?

Phil. What mean you, Hylas, by the *phenomena?*

Hyl. I mean the appearances which I perceive by my senses.

Phil. And the appearances perceived by sense, are they not ideas?

Hyl. I have told you so a hundred times.

Phil. Therefore, to explain the phenomena, is to shew how we come to be affected with ideas, in that manner and order wherein they are imprinted on our senses. Is it not?

Hyl. It is.

Phil. Now if you can prove, that any philosopher hath explained the production of any one idea in our minds by the help of *matter*, I shall for ever acquiesce, and look on all that hath been said against it as nothing: but if you cannot, it is in vain to urge the explication of phenomena. That a being endowed with knowledge and will, should produce or exhibit ideas, is easily understood. But that a being, which is utterly destitute of these faculties, should be able to produce ideas, or in any sort to affect an intelligence, this I can never understand. This I say, though we had some positive conception of matter, though we knew its qualities, and could comprehend its existence, would yet be so far from explaining things, that it is itself the most inexplicable thing in the world. And yet for all this, it will not follow, that philosophers have been doing nothing; for by observing and reasoning upon the connexion of

ideas, they discover the laws and methods of nature, which is a part of knowledge both useful and entertaining.

Hyl. After all, can it be supposed God would deceive all mankind? Do you imagine, he would have induced the whole world to believe the being of matter, if there was no such thing?

Phil. That every epidemical opinion arising from prejudice, or passion, or thoughtlessness, may be imputed to God, as the author of it, I believe you will not affirm. Whatsoever opinion we father on him, it must be either because he has discovered it to us by supernatural revelation, or because it is so evident to our natural faculties, which were framed and given us by God, that it is impossible we should withhold our assent from it. But where is the revelation? or where is the evidence that extorts the belief of matter? Nay, how does it appear, that matter taken for something distinct from what we perceive by our senses, is thought to exist by all mankind, or, indeed, by any except a few philosophers, who do not know what they would be at? Your question supposes these points are clear; and when you have cleared them, I shall think myself obliged to give you another answer. In the mean time let it suffice that I tell you, I do not suppose God has deceived mankind at all.

Hyl. But the novelty, Philonous, the novelty! There lies the danger. New notions should always be discountenanced; they unsettle men's minds, and nobody knows where they will end.

Phil. Why the rejecting a notion that hath no foundation, either in sense, or in reason, or in Divine authority, should be thought to unsettle the belief of such opinions as are grounded on all or any of these, I cannot imagine. That innovations in government and religion, are dangerous, and ought to be discountenanced, I

freely own. But is there the like reason why they should be discouraged in philosophy? The making any thing known which was unknown before, is an innovation in knowledge: and if all such innovations had been forbidden, men would have made a notable progress in the arts and sciences. But it is none of my business to plead for novelties and paradoxes. That the qualities we perceive, are not on the objects: that we must not believe our senses: that we know nothing of the real nature of things, and can never be assured even of their existence: that real colours and sounds are nothing but certain unknown figures and motions: that motions are in themselves neither swift nor slow: that there are in bodies absolute extensions, without any particular magnitude or figure: that a thing stupid, thoughtless, and inactive, operates on a spirit: that the least particle of a body contains innumerable extended parts:—these are the novelties, these are the strange notions, which shock the genuine uncorrupted judgment of all mankind; and being once admitted, embarrass the mind with endless doubts and difficulties. And it is against these and the like innovations I endeavour to vindicate common sense. It is true, in doing this, I may, perhaps, be obliged to use some *ambages*, and ways of speech not common. But if my notions are once thoroughly understood, that which is most singular in them, will, in effect, be found to amount to no more than this: that it is absolutely impossible, and a plain contradiction to suppose, any unthinking being should exist without being perceived by a mind. And if this notion be singular, it is a shame it should be so at this time of day, and in a Christian country.

Hyl. As for the difficulties other opinions may be liable to, those are out of the question. It is your business to defend your own opinion. Can any thing be plainer, than that you are for changing all things into

ideas? You, I say, who are not ashamed to charge me with scepticism. This is so plain, there is no denying it.

Phil. You mistake me. I am not for changing things into ideas, but rather ideas into things; since those immediate objects of perception, which, according to you, are only appearances of things, I take to be the real things themselves.

Hyl. Things! you may pretend what you please; but it is certain, you leave us nothing but the empty forms of things, the outside only which strikes the senses.

Phil. What you call the empty forms and outside of things, seem to me the very things themselves. Nor are they empty or incomplete otherwise than upon your supposition, that matter is an essential part of all corporeal things. We both, therefore, agree in this, that we perceive only sensible forms: but herein we differ, you will have them to be empty appearances, I real beings. In short, you do not trust your senses, I do.

Hyl. You say you believe your senses; and seem to applaud yourself that in this you agree with the vulgar. According to you, therefore, the true nature of a thing is discovered by the senses. If so, whence comes that disagreement? Why is not the same figure, and other sensible qualities, perceived all manner of ways? And why should we use a microscope, the better to discover the true nature of a body, if it were discoverable to the naked eye?

Phil. Strictly speaking, Hylas, we do not see the same object that we feel; neither is the same object perceived by the microscope, which was by the naked eye. But in case every variation was thought sufficient to constitute a new kind or individual, the endless number or confusion of names would render language impracticable. Therefore, to avoid this as well as other inconveniences which are obvious upon a little thought,

men combine together several ideas, apprehended by divers senses, or by the same sense at different times, or in different circumstances, but observed, however, to have some connexion in nature, either with respect to coexistence or succession; all which they refer to one name, and consider as one thing. Hence it follows, that when I examine by my other senses a thing I have seen, it is not in order to understand better the same object which I had perceived by sight, the object of one sense not being perceived by the other senses. And when I look through a microscope, it is not that I may perceive more clearly what I perceived already with my bare eyes, the object perceived by the glass being quite different from the former. But in both cases my aim is only to know what ideas are connected together; and the more a man knows of the connexion of ideas, the more he is said to know of the nature of things. What, therefore, if our ideas are variable; what if our senses are not in all circumstances affected with the same appearances? It will not thence follow, they are not to be trusted, or that they are inconsistent either with themselves or any thing else, except it be with your preconceived notion of (I know not what) one single, unchanged, unperceivable, real nature, marked by each name: which prejudice seems to have taken its rise from not rightly understanding the common language of men speaking of several distinct ideas, as united into one thing by the mind. And, indeed, there is cause to suspect several erroneous conceits of the philosophers are owing to the same original: while they began to build their schemes, not so much on notions as words, which were framed by the vulgar, merely for conveniency and dispatch in the common actions of life, without any regard to speculation.

Hyl. Methinks I apprehend your meaning.

Phil. It is your opinion, the ideas we perceive by our senses are not real things, but images, or copies of

them. Our knowledge, therefore, is no farther real, than as our ideas are the true representations of those originals. But as these supposed originals are in themselves unknown, it is impossible to know how far our ideas resemble them; or whether they resemble them at all. We cannot, therefore, be sure we have any real knowledge. Farther, as our ideas are perpetually varied, without any change in the supposed real things, it necessarily follows they cannot all be true copies of them: or, if some are, and others are not, it is impossible to distinguish the former from the latter. And this plunges us yet deeper in uncertainty. Again, when we consider the point, we cannot conceive how any idea, or any thing like an idea, should have an absolute existence out of a mind: nor consequently, according to you, how there should be any real thing in nature. The result of all which is, that we are thrown into the most hopeless and abandoned scepticism. Now give me leave to ask you, First, Whether your referring ideas to certain absolutely existing unperceived substances, as their originals, be not the source of all this scepticism? Secondly, Whether you are informed, either by sense or reason, of the existence of those unknown originals? And in case you are not, whether it be not absurd to suppose them? Thirdly, Whether, upon inquiry, you find there is any thing distinctly conceived or meant by the *absolute or external existence of unperceiving substances?* Lastly, Whether, the premises considered, it be not the wisest way to follow nature, trust your senses, and, laying aside all anxious thought about unknown natures or substances, admit with the vulgar those for real things, which are perceived by the senses?

Hyl. For the present, I have no inclination to the answering part. I would much rather see how you can get over what follows. Pray are not the objects perceived by the senses of one, likewise perceivable to others present? If there were a hundred more here, they

would all see the garden, the trees, and flowers, as I see them. But they are not in the same manner affected with the ideas I frame in my imagination. Does not this make a difference between the former sort of objects and the latter?

Phil. I grant it does. Nor have I ever denied a difference between the objects of sense and those of imagination. But what would you infer from thence? You cannot say that sensible objects exist unperceived, because they are perceived by many.

Hyl. I own, I can make nothing of that objection: but it hath led me into another. Is it not your opinion, that by our senses we perceive only the ideas existing in our minds?

Phil. It is.

Hyl. But the same idea which is in my mind, cannot be in yours, or in any other mind. Doth it not, therefore, follow from your principles, that no two can see the same thing? And is not this highly absurd?

Phil. If the term *same* be taken in the vulgar acceptation, it is certain (and not at all repugnant to the principles I maintain) that different persons may perceive the same thing; or the same thing or idea exist in different minds. Words are of arbitrary imposition; and since men are used to apply the word *same* where no distinction or variety is perceived, and I do not pretend to alter their perceptions, it follows, that as men have said before, *several saw the same thing*, so they may upon like occasions still continue to use the same phrase, without any deviation either from propriety of language, or the truth of things. But if the term *same* be used in the acceptation of philosophers, who pretend to an abstracted notion of identity, then, according to their sundry definitions of this notion (for it is not yet agreed wherein that philosophic identity consists), it may or may not be possible for divers persons to perceive the same thing. But whether philosophers shall think fit to call a

thing the *same* or no, is, I conceive of small importance. Let us suppose several men together, all endued with the same faculties, and consequently affected in like sort by their senses, and who had yet never known the use of language; they would without question agree in their perceptions. Though perhaps, when they came to the use of speech, some regarding the uniformness of what was perceived, might call it the *same* thing: others, especially regarding the diversity of persons who perceived, might choose the denomination of different things. But who sees not that all the dispute is about a word? to wit, whether what is perceived by different persons, may yet have the term *same* applied to it? Or suppose a house, whose walls or outward shell remaining unaltered, the chambers are all pulled down, and new ones built in their place; and that you should call this the *same*, and I should say it was not the *same* house: would we not for all this perfectly agree in our thoughts of the house, considered in itself? And would not all the difference consist in a sound? If you should say, We differ in our notions; for that you superadded to your idea of the house the simple abstracted idea of identity, whereas I did not; I would tell you, I know not what you mean by that *abstracted idea of identity;* and should desire you to look into your own thoughts, and be sure you understood yourself.——Why so silent, Hylas? Are you not yet satisfied, men may dispute about identity and diversity, without any real difference in their thoughts and opinions, abstracted from names? Take this farther reflection with you: that whether matter be allowed to exist or no, the case is exactly the same as to the point in hand. For the Materialists themselves acknowledge what we immediately perceive by our senses, to be our own ideas. Your difficulty therefore, that no two see the same thing, makes equally against the Materialists and me.

Hyl. But they suppose an external archetype to

which referring their several ideas, they may truly be said to perceive the same thing.

Phil. And (not to mention your having discarded those archetypes) so may you suppose an external archetype on my principles; *external*, I mean, to your own mind; though indeed it must be supposed to exist in that mind which comprehends all things; but then this serves all the ends of identity, as well as if it existed out of a mind. And I am sure you yourself will not say, it is less intelligible.

Hyl. You have indeed clearly satisfied me, either that there is no difficulty at bottom in this point: or if there be, that it makes equally against both opinions.

Phil. But that which makes equally against two contradictory opinions, can be a proof against neither.

Hyl. I acknowledge it. But after all, Philonous, when I consider the substance of what you advance against scepticism, it amounts to no more than this. We are sure that we really see, hear, feel; in a word, that we are affected with sensible impressions.

Phil. And how are we concerned any farther? I see this *cherry*, I feel it, I taste it: and I am sure *nothing* cannot be seen, or felt, or tasted: it is therefore *real*. Take away the sensations of softness, moisture, redness, tartness, and you take away the *cherry*. Since it is not a being distinct from sensations; a *cherry*, I say, is nothing but a congeries of sensible impressions, or ideas perceived by various senses: which ideas are united into one thing (or have one name given them) by the mind; because they are observed to attend each other. Thus when the palate is affected with such a particular taste, the sight is affected with a red colour, the touch with roundness, softness, &c. Hence, when I see, and feel, and taste, in sundry certain manners, I am sure the *cherry* exists, or is real; its reality being in my opinion nothing abstracted from those sensations. But if by the word *cherry* you mean an unknown nature distinct from

all those sensible qualities, and by its existence something distinct from its being perceived; then indeed I own, neither you nor I, nor any one else, can be sure it exists.

Hyl. But what would you say, Philonous, if I should bring the very same reasons against the existence of sensible things in a mind, which you have offered against their existing in a material *substratum?*

Phil. When I see your reasons, you shall hear what I have to say to them.

Hyl. Is the mind extended or unextended?

Phil. Unextended, without doubt.

Hyl. Do you say the things you perceive are in your mind?

Phil. They are.

Hyl. Again, have I not heard you speak of sensible impressions?

Phil. I believe you may.

Hyl. Explain to me now, O Philonous! how it is possible there should be room for all those trees and houses to exist in your mind. Can extended things be contained in that which is unextended? Or are we to imagine impressions made on a thing void of all solidity? You cannot say objects are in your mind, as books in your study: or that things are imprinted on it, as the figure of a seal upon wax. In what sense therefore are we to understand those expressions? Explain me this if you can: and I shall then be able to answer all those queries you formerly put to me about my *substratum.*

Phil. Look you, Hylas, when I speak of objects as existing in the mind or imprinted on the senses; I would not be understood in the gross literal sense, as when bodies are said to exist in a place, or a seal to make an impression upon wax. My meaning is only, that the mind comprehends or perceives them; and that it is affected from without, or by some being distinct from itself. This is my explication of your difficulty; and how

it can serve to make your tenet of an unperceiving material *substratum* intelligible, I would fain know.

Hyl. Nay, if that be all, I confess I do not see what use can be made of it. But are you not guilty of some abuse of language in this?

Phil. None at all: it is no more than common custom, which you know is the rule of language, hath authorized: nothing being more usual, than for philosophers to speak of the immediate objects of the understanding as things existing in the mind. Nor is there any thing in this, but what is conformable to the general analogy of language; most part of the mental operations being signified by words borrowed from sensible things; as is plain in the terms *comprehend, reflect, discourse, &c.* which, being applied to the mind, must not be taken in their gross original sense.

Hyl. You have, I own, satisfied me in this point: but there still remains one great difficulty, which I know not how you will get over. And indeed it is of such importance, that if you could solve all others, without being able to find a solution for this, you must never expect to make me a proselyte to your principles.

Phil. Let me know this mighty difficulty.

Hyl. The Scripture account of the creation, is what appears to me utterly irreconcilable with your notions. Moses tells us of a creation: a creation of what? of ideas? No certainly, but of things, of real things, solid corporeal substances. Bring your principles to agree with this, and I shall perhaps agree with you.

Phil. Moses mentions the sun, moon, and stars, earth and sea, plants and animals: that all these do really exist, and were in the beginning created by God, I make no question. If by *ideas*, you mean fictions and fancies of the mind, then these are no ideas. If by *ideas*, you mean immediate objects of the understanding, or sensible things which cannot exist unperceived, or out of a mind, then these things are ideas. But whether you do,

or do not call them *ideas*, it matters little. The difference is only about a name. And whether that name be retained or rejected, the sense, the truth, and reality, of things continues the same. In common talk, the objects of our senses are not termed *ideas* but *things*. Call them so still, provided you do not attribute to them any absolute external existence, and I shall never quarrel with you for a word. The creation therefore I allow to have been a creation of things, of *real* things. Neither is this in the least inconsistent with my principles, as is evident from what I have now said; and would have been evident to you without this, if you had not forgotten what had been so often said before. But as for solid corporeal substances, I desire you to shew where Moses makes any mention of them; and if they should be mentioned by him, or any other inspired writer, it would still be incumbent on you to shew those words were not taken in the vulgar acceptation, for things falling under our senses, but in the philosophic acceptation, for matter, or an unknown quiddity, with an absolute existence. When you have proved these points, then (and not till then) may you bring the authority of Moses into our dispute.

Hyl. It is in vain to dispute about a point so clear. I am content to refer it to your own conscience. Are you not satisfied there is some peculiar repugnancy between the Mosaic account of the creation and your notions?

Phil. If all possible sense, which can be put on the first chapter of Genesis, may be conceived as consistently with my principles as any other, then it has no peculiar repugnancy with them. But there is no sense you may not as well conceive, believing as I do. Since, beside spirits, all you conceive are ideas; and the existence of these I do not deny. Neither do you pretend they exist without the mind.

Hyl. Pray let me see any sense you can understand it in.

Phil. Why, I imagine that if I had been present at the creation, I should have seen things produced into being; that is, become perceptible, in the order described by the sacred historian. I ever before believed the Mosiac account of the creation, and now find no alteration in my manner of believing it. When things are said to begin or end their existence, we do not mean this with regard to God, but his creatures. All objects are eternally known by God, or, which is the same thing, have an eternal existence in his mind: but when things before imperceptible to creatures, are by a decree of God perceptible to them; then are they said to begin a relative existence, with respect to created minds. Upon reading therefore the Mosiac account of the creation, I understand that the several parts of the world became gradually perceivable to finite spirits, endowed with proper faculties; so that whoever such were present, they were in truth perceived by them. This is the literal obvious sense suggested to me, by the words of the holy Scripture: in which is included no mention or no thought, either of *substratum*, instrument, occasion, or absolute existence. And upon inquiry, I doubt not, it will be found, that most plain honest men, who believe the creation, never think of those things any more than I. What metaphysical sense you may understand it in, you only can tell.

Hyl. But, Philonous, you do not seem to be aware, that you allow created things in the beginning, only a relative, and consequently hypothetical being: that is to say, upon supposition there were men to perceive them, without which they have no actuality of absolute existence wherein creation might terminate. Is it not therefore according to you plainly impossible, the creation of any inanimate creatures should precede that of man? And is not this directly contrary to the Mosaic account;

Phil. In answer to that, I say, *first*, created beings might begin to exist in the mind of other created intel-

ligences beside men. You will not therefore be able to prove any contradiction between Moses, and my notions, unless you first shew, there was no other order of finite created spirits in being before man. I say farther, in case we conceive the creation, as we should at this time a parcel of plants or vegetables of all sorts, produced by an invisible power, in a desert where no body was present that this way of explaining or conceiving it, is consistent with my principles, since they deprive you of nothing, either sensible or imaginable: that it exactly suits with the common, natural, and undebauched notions of mankind: that it manifests the dependence of all things on God; and consequently hath all the good effect or influence, which it is possible that important article of our faith should have in making men humble, thankful, and resigned to their Creator. I say, moreover, that in this naked conception of things, divested of words, there will not be found any notion of what you call the *actuality of absolute existence*. You may indeed raise a dust with those terms, and so lengthen our dispute to no purpose. But I entreat you calmly to look into your own thoughts, and then tell me if they are not a useless and unintelligible jargon.

Hyl. I own, I have no very clear notion annexed to them. But what say you to this? Do you not make the existence of sensible things consist in their being in a mind? and were not all things eternally in the mind of God? Did they not therefore exist from all eternity, according to you? And how could that which was eternal, be created in time? Can any thing be clearer or better connected than this?

Phil. And are not you too of opinion, that God knew all things from eternity?

Hyl. I am.

Phil. Consequently they always had a being in the Divine intellect.

Hyl. This I acknowledge.

Phil. By your own confession therefore nothing is new, or begins to be, in respect of the mind of God. So we are agreed in that point.

Hyl. What shall we make then of the creation?

Phil. May we not understand it to have been entirely in respect of finite spirits; so that things, with regard to us, may properly be said to begin their existence, or be created, when God decreed they should become perceptible to intelligent creatures, in that order and manner which he then established, and we now call the laws of nature? You may call this a *relative*, or *hypothetical existence* if you please. But so long as it supplies us with the most natural, obvious, and literal sense of the Mosaic history of the creation; so long as it answers all the religious ends of that great article; in a word, so long as you can assign no other sense or meaning in its stead; why should we reject this? Is it to comply with a ridiculous sceptical humour of making every thing nonsense and unintelligible? I am sure you cannot say, it is for the glory of God. For allowing it to be a thing possible and conceivable, that the corporeal world should have an absolute subsistence extrinsical to the mind of God, as well as to the minds of all created spirits; yet how could this set forth either the immensity or omniscience of the Deity, or the necessary and immediate dependence of all things on him? Nay, would it not rather seem to derogate from those attributes?

Hyl. Well, but as to this decree of God's, for making things perceptible, what say you, Philonous, is it not plain, God did either execute that decree from all eternity, or at some certain time began to will what he had not actually willed before, but only designed to will. If the former, then there could be no creation or beginning of existence in finite things. If the latter, then we must acknowledge something new to befal the

Deity; which implies a sort of change: and all change argues imperfection.

Phil. Pray consider what you are doing. Is it not evident, this objection concludes equally against a creation in any sense; nay, against every other act of the Deity, discoverable by the light of nature? None of which can we conceive, otherwise than as performed in time, and having a beginning. God is a being of transcendent and unlimited perfections: his nature therefore is incomprehensible to finite spirits. It is not therefore to be expected, that any man, whether *Materialist* or *Immaterialist*, should have exactly just notions of the Deity, his attributes, and ways of operation. If then you would infer any thing against me, your difficulty must not be drawn from the inadequateness of our conceptions of the Divine nature, which is unavoidable on any scheme; but from the denial of matter, of which there is not one word, directly or indirectly, in what you have now objected.

Hyl. I must acknowledge, the difficulties you are concerned to clear, are such only as arise from the non-existence of matter, and are peculiar to that notion. So far you are in the right. But I cannot by any means bring myself to think there is no such peculiar repugnancy between the creation and your opinion; though indeed where to fix it, I do not distinctly know.

Phil. What would you have? Do I not acknowledge a twofold state of things, the one ectypal or natural, the other archetypal and eternal? The former was created in time; the latter existed from everlasting in the mind of God. Is not this agreeable to the common notions of divines? Or is any more than this necessary in order to conceive the creation? but you suspect some peculiar repugnancy, though you know not where it lies. To take away all possibility of scruple in the case, do but consider this one point. Either you are not able to conceive the creation on any hypothesis whatsoever;

and if so, there is no ground for dislike or complaint against my particular opinion on that score: or you are able to conceive it; and if so, why not on my principles, since thereby nothing conceivable is taken away? You have all along been allowed the full scope of sense, imagination, and reason. Whatever therefore you could before apprehend, either immediately or mediately by your senses, or by ratiocination from your senses; whatever you could perceive, imagine, or understand, remains still with you. If therefore the notion you have of the creation by other principles be intelligible, you have it still upon mine; if it be not intelligible, I conceive it to be no notion at all; and so there is no loss of it. And indeed it seems to me very plain, that the supposition of matter, that is, a thing perfectly unknown and inconceivable, cannot serve to make us conceive any thing. And I hope, it need not be proved to you, that if the existence of matter doth not make the creation conceivable, the creation's being without it inconceivable, can be no objection against its nonexistence.

Hyl. I confess, Philonous, you have almost satisfied me in this point of the creation.

Phil. I would fain know why you are not quite satisfied. You tell me indeed of a repugnancy between the Mosaic history and Immaterialism: but you know not where it lies. Is this reasonable, Hylas? Can you expect I should solve a difficulty without knowing what it is? But to pass by all that, would not a man think you were assured there is no repugnancy between the received notions of Materialists and the inspired writings?

Hyl. And so I am.

Phil. Ought the historical part of Scripture to be understood in a plain obvious sense, or in a sense which is metaphysical, and out of the way?

Hyl. In the plain sense doubtless.

Phil. When Moses speaks of herbs, earth, water, &c. as having been created by God; think you not the sensible things commonly signified by those words, are suggested to every unphilosophical reader?

Hyl. I cannot help thinking so.

Phil. And are not all ideas, or things perceived by sense, to be denied a real existence by the doctrine of the Materialist?

Hyl. This I have already acknowledged.

Phil. The creation therefore, according to them, was not the creation of things sensible, which have only a relative being, but of certain unknown natures, which have an absolute being, wherein creation might terminate?

Hyl. True.

Phil. Is it not therefore evident, the assertors of matter destroy the plain obvious sense of Moses, with which their notions are utterly inconsistent; and instead of it obtrude on us I know not what, something equally unintelligible to themselves and me?

Hyl. I cannot contradict you.

Phil. Moses tells us of a creation. A creation of what? of unknown quiddities, of occasions, or *substratums?* No, certainly; but of things obvious to the senses. You must first reconcile this with your notions, if you expect I should be reconciled to them.

Hyl. I see you can assault me with my own weapons.

Phil. Then as to *absolute existence*, was there ever known a more jejune notion than that? Something it is, so abstracted and unintelligible, that you have frankly owned you could not conceive it, much less explain any thing by it. But allowing matter to exist, and the notion of absolute existence to be as clear as light; yet was this ever known to make the creation more credible? Nay, hath it not furnished the Atheists and infidels of all ages, with the most plausible arguments

against a creation? That a corporeal substance, which hath an absolute existence without the minds of spirits, should be produced out of nothing by the mere will of a spirit, hath been looked upon as a thing so contrary to all reason, so impossible and absurd, that not only the most celebrated among the ancients, but even divers modern and Christian philosophers have thought matter coeternal with the Deity. Lay these things together, and then judge you whether Materialism disposes men to believe the creation of things.

Hyl. I own, Philonous, I think it does not. This of the *creation* is the last objection I can think of; and I must needs own it hath been sufficiently answered as well as the rest. Nothing now remains to be overcome, but a sort of unaccountable backwardness, that I find in myself towards your notions.

Phil. When a man is swayed, he knows not why, to one side of the question; can this, think you, be any thing else but the effect of prejudice, which never fails to attend old and rooted notions? And indeed in this respect I cannot deny the belief of matter to have very much the advantage over the contrary opinion, with men of a learned education.

Hyl. I confess it seems to be as you say.

Phil. As a balance therefore to this weight of prejudice, let us throw into the scale the great advantages that arise from the belief of Immaterialism, both in regard to religion and human learning. The being of a God, and incorruptibility of the soul, those great articles of religion, are they not proved with the clearest and most immediate evidence? When I say the being of a *God*, I do not mean an obscure general cause of things, whereof we have no conception, but *God*, in the strict and proper sense of the word. A being whose spirituality, omnipresence, providence, omniscience, infinite power and goodness, are as conspicuous as the existence of sensible things, of which (notwith-

standing the fallacious pretences and affected scruples of sceptics) there is no more reason to doubt than of our own being. Then with relation to human sciences; in natural philosophy, what intricacies, what obscurities, what contradictions, hath the belief of matter led men into! To say nothing of the numberless disputes about its extent, continuity, homogenity, gravity, divisibility, &c. Do they not pretend to explain all things by bodies operating on bodies, according to the laws of motion? and yet, are they able to comprehend how one body should move another? Nay, admitting there was no difficulty in reconciling the notion of an inert being with a cause, or in conceiving how an accident might pass from one body to another; yet by all their strained thoughts and extravagant suppositions, have they been able to reach the mechanical production of any one animal or vegetable body? Can they account by the laws of motion for sounds, tastes, smells, or colours, or for the regular course of things? Have they accounted by physical principles for the aptitude and contrivance, even of the most inconsiderable parts of the universe? But laying aside matter and corporeal causes, and admitting only the efficiency of an all-perfect mind, are not all the effects of nature easy and intelligible? If the *phenomena* are nothing else but *ideas*, God is a *spirit*, but matter an unintelligent, unperceiving being. If they demonstrate an unlimited power in their cause, God is active and omnipotent, but matter an inert mass. If the order, regularity, and usefulness of them, can never be sufficiently admired, God is infinitely wise and provident, but matter destitute of all contrivance and design. These surely are great advantages in *physics*. Not to mention that the apprehension of a distant Deity naturally disposes men to a negligence in their *moral* actions, which they would be more cautious of, in case they thought him immediately present, and acting on their minds with-

out the interposition of matter, or unthinking second causes. Then in *metaphysics*; what difficulties concerning entity in abstract, substantial forms, hylarchic principles, plastic natures, substance and accident principle of individuation, possibility of matter's thinking, origin of ideas, the manner how two independent substances, so widely different as *spirit* and *matter*, should mutually operate on each other? what difficulties, I say, and endless disquisitions concerning these and innumerable other the like points, do we escape by supposing only spirits and ideas? Even the *mathematics* themselves, if we take away the absolute existence of extended things, become much more clear and easy; the most shocking paradoxes and intricate speculations in those sciences, depending on the infinite divisibility of finite extension, which depends on that supposition. But what need is there to insist on the particular sciences? Is not that opposition to all science whatsoever, that frensy of the ancient and modern sceptics, built on the same foundation? Or can you produce so much as one argument against the reality of corporeal things, or in behalf of that avowed utter ignorance of their natures, which doth not suppose their reality to consist in an external absolute existence? Upon this supposition indeed, the objections from the change of colours in a pigeon's neck, or the appearance of a broken oar in the water, must be allowed to have weight. But those and the like objections vanish, if we do not maintain the being of absolute external originals, but place the reality of things in ideas, fleeting indeed, and changeable; however, not changed at random, but according to the fixed order of nature. For herein consists that constancy and truth of things, which secures all the concerns of life, and distinguishes that which is *real* from the irregular visions of the fancy.

Hyl. I agree to all you have now said, and must own that nothing can incline me to embrace your

opinion, more than the advantages I see it is attended with. I am by nature lazy; and this would be a mighty abridgment in knowledge. What doubts, what hypotheses, what labyrinths of amusement, what fields of disputation, what an ocean of false learning, may be avoided by that single notion of *Immaterialism?*

Phil. After all, is there any thing farther remaining to be done? You may remember you promised to embrace that opinion which upon examination should appear most agreeable to common sense, and remote from *scepticism*. This by your own confession is that which denies matter, or the absolute existence of corporeal things. Nor is this all; the same notion has been proved several ways, viewed in different lights, pursued in its consequences, and all objections against it cleared. Can there be a greater evidence of its truth? or is it possible it should have all the marks of a true opinion, and yet be false?

Hyl. I own myself entirely satisfied for the present in all respects. But what security can I have that I shall still continue the same full assent to your opinion, and that no unthought-of objection or difficulty will occur hereafter?

Phil. Pray, Hylas, do you in other cases, when a point is once evidently proved, withhold your assent on account of objections or difficulties it may be liable to? Are the difficulties that attend the doctrine of incommensurable quantities, of the angle of contact, of the asymptotes to curves, or the like, sufficient to make you hold out against mathematical demonstration? Or will you disbelieve the providence of God, because there may be some particular things which you know not how to reconcile with it? If there are difficulties attending Immaterialism, there are at the same time direct and evident proofs of it. But for the existence of matter, there is not one proof, and far more numerous and insurmountable objections lie against it. But

where are those mighty difficulties you insist on? Alas! you know not where or what they are; something which may possibly occur hereafter. If this be a sufficient pretence for withholding your full assent, you should never yield it to any proposition, how free soever from exceptions, how clearly and solidly soever demonstrated.

Hyl. You have satisfied me, Philonous.

Phil. But to arm you against all future objections, do but consider, that which bears equally hard on two contradictory opinions, can be proof against neither. Whenever therefore any difficulty occurs, try if you can find a solution for it on the hypothesis of the Materialists. Be not deceived by words; but sound your own thoughts. And in case you cannot conceive it easier by the help of Materialism, it is plain it can be no objection against Immaterialism. Had you proceeded all along by this rule, you would probably have spared yourself abundance of trouble in objecting; since of all your difficulties I challenge you to shew one that is explained by matter: nay, which is not more unintelligible with than without that supposition, and consequently makes rather *against* than *for* it. You should consider in each particular, whether the difficulty arises from the *nonexistence of matter*. If it doth not, you might as well argue from the infinite divisibility of extension against the Divine prescience, as from such a difficulty against Immaterialism. And yet upon recollection I believe you will find this to have been often if not always the case. You should likewise take heed not to argue on a *petitio principii*. One is apt to say, the unknown substances ought to be esteemed real things, rather than the ideas in our minds: and who can tell but the unthinking external substance may concur as a cause or instrument in the productions of our ideas? But is not this proceeding on a supposition that there are such external substances? And to sup-

pose this, is it not begging the question? But above all things you should beware of imposing on yourself by that vulgar sophism, which is called *ignoratio elenchi.* You talked often as if you thought I maintained the nonexistence of sensible things; whereas in truth no one can be more thoroughly assured of their existence than I am: and it is you who doubt; I should have said, positively deny it. Every thing that is seen, felt, heard, or any way perceived by the senses, is on the principles I embrace, a real being, but not on yours. Remember, the matter you contend for is an unknown somewhat (if indeed it may be termed *somewhat*), which is quite stripped of all sensible qualities, and can neither be perceived by sense, nor apprehended by the mind. Remember, I say, that it is not any object which is hard or soft, hot or cold, blue or white, round or square, &c. For all these things I affirm do exist. Though indeed I deny they have an existence distinct from being perceived; or that they exist out of all minds whatsoever. Think on these points; let them be attentively considered and still kept in view. Otherwise you will not comprehend the state of the question; without which your objections will always be wide of the mark, and instead of mine, may possibly be directed (as more than once they have been) against your own notions.

Hyl. I must needs own, Philonous, nothing seems to have kept me from agreeing with you more than this same *mistaking the question.* In denying matter, at first glimpse I am tempted to imagine you deny the things we see and feel; but, upon reflection, find there is no ground for it. What think you, therefore, of retaining the name *matter*, and applying it to sensible things? This may be done without any change in your sentiments: and believe me, it would be a means of reconciling them to some persons, who may be more shocked at an innovation in words than in opinion.

Phil. With all my heart: retain the word *matter*, and apply it to the objects of sense, if you please, provided you do not attribute to them any subsistence distinct from their being perceived. I shall never quarrel with you for an expression. *Matter*, or *material substance*, are terms introduced by philosophers; and as used by them, imply a sort of independency, or a subsistence distinct from being perceived by a mind: but are never used by common people; or, if ever, it is to signify the immediate objects of sense. One would think, therefore, so long as the names of all particular things, with the terms *sensible*, *substance*, *body*, *stuff*, and the like, are retained, the word *matter* should be never missed in common talk. And in philosophical discourses it seems the best way to leave it quite out; since there is not, perhaps, any one thing that hath more favoured and strengthened the depraved bent of the mind towards atheism, than the use of that general confused term.

Hyl. Well but, Philonous, since I am content to give up the notion of an unthinking substance exterior to the mind, I think you ought not to deny me the privilege of using the word *matter* as I please, and annexing it to a collection of sensible qualities subsisting only in the mind. I freely own there is no other substance, in a strict sense, than *spirit*. But I have been so long accustomed to the term *matter*, that I know not how to part with it. To say, there is no *matter* in the world, is still shocking to me. Whereas to say, there is no *matter*, if by that term be meant an unthinking substance existing without the mind: but if by *matter* is meant some sensible thing, whose existence consists in being perceived, then there is *matter*: this distinction gives it quite another turn: and men will come into your notions with small difficulty, when they are proposed in that manner. For after all, the controversy about *matter* in the strict acceptation of it, lies altogether between you and the philosophers; whose principles,

I acknowledge, are not near so natural, or so agreeable to the common sense of mankind, and holy Scripture, as yours. There is nothing we either desire or shun, but as it makes, or is apprehended to make, some part of our happiness or misery. But what hath happiness or misery, joy or grief, pleasure or pain, to do with absolute existence, or with unknown entities, abstracted from all relation to us? It is evident, things regard us only as they are pleasing or displeasing: and they can please or displease, only so far forth as they are perceived. Farther, therefore, we are not concerned; and thus far you leave things as you found them. Yet still there is something new in this doctrine. It is plain, I do not now think with the philosophers, nor yet altogether with the vulgar. I would know how the case stands in that respect: precisely, what you have added to, or altered in my former notions.

Phil. I do not pretend to be a setter-up of *new notions*. My endeavours tend only to unite and place in a clearer light that truth, which was before shared between the vulgar and the philosophers: the former being of opinion, that *those things they immediately perceive are the real things*; and the latter, that *the things immediately perceived, are ideas which exist only in the mind.* Which two notions put together, do, in effect, constitute the substance of what I advance.

Hyl. I have been a long time distrusting my senses; methought I saw things by a dim light, and through false glasses. Now the glasses are removed, and a new light breaks in upon my understanding. I am clearly convinced that I see things in their native forms; and am no longer in pain about their unknown natures or absolute existence. This is the state I find myself in at present: though, indeed, the course that brought me to it, I do not yet thoroughly comprehend. You set out upon the same principles that academics, Cartesians, and the like sects, usually do; and for a long time it

looked as if you were advancing their philosophical scepticism; but, in the end, your conclusions are directly opposite to theirs.

Phil. You see, Hylas, the water of yonder fountain, how it is forced upwards, in a round column, to a certain height; at which it breaks and falls back into the basin from whence it rose: its ascent as well as descent, proceeding from the same uniform law or principle of *gravitation.* Just so, the same principles which at first view lead to scepticism, pursued to a certain point, bring men back to common sense.

AN ESSAY

TOWARDS A

NEW THEORY OF VISION.

TO THE RIGHT HONOURABLE

SIR JOHN PERCIVALE, BART.

ONE OF HER MAJESTY'S MOST HONOURABLE PRIVY COUNCIL

IN THE KINGDOM OF IRELAND.

SIR,

I COULD not, without doing violence to myself, forbear upon this occasion, to give some public testimony of the great and well-grounded esteem I have conceived for you, ever since I had the honour and happiness of your acquaintance. The outward advantages of fortune, and the early honours with which you are adorned, together with the reputation you are known to have amongst the best and most considerable men, may well imprint veneration and esteem, on the minds of those who behold you from a distance. But these are not the chief motives that inspire me with the respect I bear you. A nearer approach has given me the view of something in your person infinitely beyond the external ornaments of honour and estate. I mean, an intrinsic stock of virtue and good sense, a true concern for religion, and disinterested love of your country. Add to these an uncommon proficiency in the best and most useful parts of knowledge; together with (what in my mind is a perfection of the first rank) a surpassing goodness of nature. All which I have collected, not from the uncertain reports of fame, but from my own experience. Within these few months, that I have the honour to be known unto you, the many delightful hours I have passed in your agreeable and improving conversation, have afforded me the opportunity of discovering in you many excellent qualities, which

at once fill me with admiration and esteem. That one at those years, and in those circumstances of wealth and greatness, should continue proof against the charms of luxury, and those criminal pleasures, so fashionable and predominant in the age we live in; that he should preserve a sweet and modest behaviour, free from that insolent and assuming air so familiar to those who are placed above the ordinary rank of men; that he should manage a great fortune with that prudence and inspection, and at the same time expend it with that generosity and nobleness of mind, as to shew himself equally remote from a sordid parsimony, and a lavish inconsiderate profusion of the good things he is intrusted with;—this, surely, were admirable and praiseworthy. But that he should moreover, by an impartial exercise of his reason and constant perusal of the sacred Scriptures, endeavour to attain a right notion of the principles of natural and revealed religion; that he should with the concern of a true patriot have the interest of the public at heart, and omit no means of informing himself what may be prejudicial or advantageous to his country, in order to prevent the one, and promote the other; in fine, that by a constant application to the most severe and useful studies, by a strict observation of the rules of honour and virtue, by frequent and serious reflections on the mistaken measures of the world, and the true end and happiness of mankind, he should in all respects qualify himself, bravely to run the race that is set before him, to deserve the character of *great* and *good* in this life, and be ever happy hereafter;—this were amazing, and almost incredible. Yet all this, and more than this, SIR, might I justly say of you; did either your modesty permit, or your character stand in need of it. I know it might deservedly be thought a vanity in me, to imagine that any thing coming from so obscure a hand as mine, could add a lustre to your reputation. But I am withal sensible, how far I advance

the interest of my own, by laying hold on this opportunity to make it known, that I am admitted into some degree of intimacy with a person of your exquisite judgment. And with that view I have ventured to make you an address of this nature, which, the goodness I have ever experienced in you, inclines me to hope will meet with a favourable reception at your hands. Though I must own I have your pardon to ask, for touching on what may, possibly, be offensive to a virtue you are possessed of in a very distinguishing degree. Excuse me, SIR, if it was out of my power, to mention the name of SIR JOHN PERCIVALE, without paying some tribute to that extraordinary and surprising merit, whereof I have so lively and affecting an *idea*, and which, I am sure, cannot be exposed in too full a light for the imitation of others. Of late, I have been agreeably employed in considering the most noble, pleasant, and comprehensive of all the senses. The fruit of that (labour shall I call it or) diversion is what I now present you with, in hopes it may give some entertainment to one who, in the midst of business and vulgar enjoyments, preserves a relish for the more refined pleasures of thought and reflection. My thoughts concerning *vision* have led me into some notions, so far out of the common road, that it had been improper to address them to one of a narrow and contracted *genius*. But you, SIR, being master of a large and free understanding, raised above the power of those prejudices that enslave the far greater part of mankind, may deservedly be thought a proper patron for an attempt of this kind. Add to this, that you are no less disposed to forgive, than qualified to discern, whatever faults may occur in it. Nor do I think you defective in any one point necessary to form an exact judgment on the most abstract and difficult things, so much as in a just confidence of your own abilities. And in this one instance, give me leave to say, you shew a manifest weakness of judgment. With relation to the following *Essay*, I shall

only add, that I beg your pardon for laying a trifle of that nature in your way at a time when you are engaged in the important affairs of the nation, and desire you to think, that I am, with all sincerity and respect,

SIR,

Your most faithful

And most humble servant,

GEORGE BERKELEY.

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AN

ESSAY

TOWARDS

A NEW THEORY OF VISION.

I. My design is to shew the manner, wherein we perceive by sight the distance, magnitude, and situation of *objects*. Also, to consider the difference there is betwixt the *ideas* of sight and touch, and whether there be any *idea* common to both senses. In treating of all which, it seems to me, the writers of *optics* have proceeded on wrong principles.

II. It is, I think, agreed by all, that *distance* of itself, and immediately, cannot be seen. For *distance* being a line directed end-wise to the eye, it projects only one point in the fund of the eye. Which point remains invariably the same, whether the distance be longer or shorter.

III. I find it also acknowledged, that the estimate we make of the distance of *objects* considerably remote, is rather an act of judgment grounded on *experience* than of *sense*. For example, when I perceive a great number of intermediate *objects*, such as houses, fields, rivers, and the like, which I have experienced to take up a considerable space, I thence form a judgment or conclusion, that the *object* I see beyond them is at a great distance. Again, when an *object* appears faint and small, which at a near distance I have experienced to make a vigorous and large appearance, I instantly conclude it to be far off. And this, it is evident, is the result of *experience*; without which, from the faintness and littleness,

I should not have inferred any thing concerning the distance of *objects*.

IV. But when an *object* is placed at so near a distance, as that the interval between the eyes bears any sensible proportion to it, it is the received opinion that the two *optic axes* (the fancy that we see only with one eye at once being exploded) concurring at the *object* do there make an *angle*, by means of which, according as it is greater or lesser, the *object* is perceived to be nearer or farther off.

V. Betwixt which, and the foregoing manner of estimating distance, there is this remarkable difference, —that whereas there was no apparent necessary connexion between small distance and a large and strong appearance, or between great distance, and a little and faint appearance; yet there appears a very necessary connexion between an obtuse angle and near distance, and an acute angle and farther distance. It does not in the least depend upon experience, but may be evidently known by any one before he had experienced it, that the nearer the concurrence of the *optic axes*, the greater the *angle*, and the remoter their concurrence is, the lesser will be the *angle* comprehended by them.

VI. There is another way, mentioned by the *optic writers*, whereby they will have us judge of those distances, in respect of which the breadth of the *pupil* hath any sensible bigness. And that is the greater or lesser divergency of the rays, which, issuing from the visible point, do fall on the *pupil*: that point being judged nearest which is seen by most diverging rays: and that remoter, which is seen by less diverging rays: and so on, the apparent distance still increasing, as the divergency of the rays decreases, till at length it becomes infinite, when the rays that fall on the *pupil* are to sense parallel. And after this manner it is said we perceive distances when we look only with one eye.

VII. In this case also, it is plain we are not beholden

to experience: it being a certain, necessary truth, that the nearer the direct rays falling on the eye approach to a *parallelism*, the farther off is the point of their intersection, or the visible point from whence they flow.

VIII. I have here set down the common current accounts that are given of our perceiving near distances by sight, which, though they are unquestionably received for true by mathematicians, and accordingly made use of by them in determining the apparent places of *objects*, do nevertheless seem to me very unsatisfactory: and that for these following reasons.

IX. *First*, it is evident that when the mind perceives any *idea*, not immediately and of itself, it must be by the means of some other *idea*. Thus, for instance, the passions which are in the mind of another, are of themselves to me invisible. I may nevertheless perceive them by sight, though not immediately yet, by means of the colours they produce in the countenance. We do often see shame or fear in the looks of a man, by perceiving the changes of his countenance to red or pale.

X. Moreover it is evident, that no *idea* which is not itself perceived can be to me the means of perceiving any other *idea*. If I do not perceive the redness or paleness of a man's face themselves, it is impossible I should perceive by them the passions which are in his mind.

XI. Now from sect. ii. it is plain, that distance is in its own nature imperceivable, and yet it is perceived by sight. It remains therefore, that it be brought into view by means of some other *idea*, that is itself immediately perceived in the act of *vision*.

XII. But those *lines* and *angles*, by means whereof mathematicians pretend to explain the perception of distance, are themselves not at all perceived, nor are they in truth ever thought of by those unskilful in *optics*. I appeal to any one's experience, whether, upon sight of an *object*, he compute its distance by the bigness of the *angle* made by the meeting of the two *optic axes*? Or whether

he ever think of the greater or lesser divergency of the rays, which arrive from any point to his *pupil?* Nay, whether it be not perfectly impossible for him to perceive by sense, the various angles wherewith he rays, according to their greater or lesser divergence, do fall on his eye. Every one is himself the best judge of what he perceives, and what not. In vain shall all the mathematicians in the world tell me, that I perceive certain *lines* and *angles* which introduce into my mind the various *ideas* of *distance*, so long as I myself am conscious of no such thing.

XIII. Since therefore those *angles* and *lines* are not themselves perceived by sight, it follows from sect. x. that the mind does not by them judge of the distance of *objects*.

XIV. *Secondly*, the truth of this assertion will be yet farther evident to any one that considers, those *lines* and *angles* have no real existence in nature, being only an hypothesis framed by mathematicians, and by them introduced into *optics*, that they might treat of that science in a *geometrical* way.

XV. The *third* and last reason I shall give for my rejecting that doctrine is, that though we should grant the real existence of those *optic angles*, &c. and that it was possible for the mind to perceive them; yet these principles would not be found sufficient to explain the phenomena of *distance*. As shall be shewn hereafter.

XVI. Now it being already shewn that distance is suggested to the mind, by the mediation of some other *idea* which is itself perceived in the act of seeing, it remains that we inquire what *ideas* or *sensations* there be that attend *vision*, unto which we may suppose the *ideas* of distance are connected, and by which they are introduced into the mind. And, *first*, it is certain by experience, that when we look at a near *object* with both eyes, according as it approaches or recedes from us, we alter the disposition of our eyes, by lessening or widening the interval between the *pupils*. This disposition or

turn of the eyes is attended with a sensation, which seems to me to be that which in this case brings the *idea* of greater or lesser distance into the mind.

XVII. Not that there is any natural or necessary connexion between the sensation we perceive by the turn of the eyes, and greater or lesser distance; but because the mind has by constant *experience* found the different sensations corresponding to the different dispositions of the eyes, to be attended each with a different degree of distance in the *object:* there has grown an habitual or customary connexion between those two sorts of *ideas*. So that the mind no sooner perceives the sensation arising from the different turn it gives the eyes, in order to bring the *pupils* nearer, or farther asunder, but it withal perceives the different *idea* of distance which was wont to be connected with that sensation. Just as upon hearing a certain sound, the *idea* is immediately suggested to the understanding which custom had united with it.

XVIII. Nor do I see how I can easily be mistaken in this matter. I know evidently that distance is not perceived of itself. That by consequence, it must be perceived by means of some other *idea* which is immediately perceived, and varies with the different degrees of distance. I know also that the sensation arising from the turn of the eyes is of itself immediately perceived, and various degrees thereof are connected with different distances; which never fail to accompany them into my mind, when I view an *object* distinctly with both eyes, whose distance is so small that in respect of it, the interval between the eyes has any considerable magnitude.

XIX. I know it is a received opinion, that by altering the disposition of the eyes, the mind perceives whether the angle of the *optic axes* is made greater or lesser. And that accordingly by a kind of *natural geometry* it judges the point of their intersection to be nearer or farther off. But that this is not true I am convinced

by my own experience; since I am not conscious, that I make any such use of the perception I have by the turn of my eyes. And for me to make those judgments, and draw those conclusions from it, without knowing that I do so, seems altogether incomprehensible.

XX. From all which it plainly follows, that the judgment we make of the distance of an *object*, viewed with both eyes, is entirely the *result of experience*. If we had not constantly found certain sensations arising from the various disposition of the eyes, attended with certain degrees of distance, we should never make those sudden judgments from them concerning the distance of *objects*; no more than we would pretend to judge of a man's thoughts by his pronouncing words we had never heard before.

XXI. *Secondly*, an *object* placed at a certain distance from the eye, to which the breadth of the *pupil* bears a considerable proportion, being made to approach, is seen more confusedly. And the nearer it is brought, the more confused appearance it makes. And this being found constantly to be so, there arises in the mind an *habitual* connexion between the several degrees of confusion and distance. The greater confusion still implying the lesser distance, and the lesser confusion the greater distance of the *object*.

XXII. This confused appearance of the *object* doth therefore seem to me to be the *medium* whereby the mind judges of distance in those cases, wherein the most approved writers of *optics* will have it judge, by the different divergency with which the rays flowing from the radiating point fall on the *pupil*. No man, I believe, will pretend to see or feel those imaginary angles that the rays are supposed to form according to their various inclinations on his eye. But he cannot choose seeing whether the *object* appear more or less confused. It is therefore a manifest consequence from what has been demonstrated, that instead of the greater

or lesser divergency of the rays, the mind makes use of the greater or lesser confusedness of the appearance, thereby to determine the apparent place of an *object*.

XXIII. Nor doth it avail to say, there is not any necessary connexion between confused *vision*, and distance great or small. For I ask any man, what necessary connexion he sees between the redness of a blush and shame? And yet no sooner shall he behold that colour to arise in the face of another, but it brings into his mind the *idea* of that passion which has been observed to accompany it.

XXIV. What seems to have misled the writers of *optics* in this matter is, that they imagine men judge of distance as they do of a conclusion in *mathematics*; betwixt which and the premises it is indeed absolutely requisite there be an apparent necessary connexion. But it is far otherwise in the sudden judgments men make of distance. We are not to think that brutes and children, or even grown reasonable men, whenever they perceive an *object* to approach or depart from them, do it by virtue of *geometry* and *demonstration*.

XXV. That one *idea* may suggest another to the mind, it will suffice that they have been observed to go together; without any demonstration of the necessity of their coexistence, or without so much as knowing what it is that makes them so to coexist. Of this there are innumerable instances, of which no one can be ignorant.

XXVI. Thus, greater confusion having been constantly attended with nearer distance, no sooner is the former *idea* perceived, but it suggests the latter to our thoughts. And if it had been the ordinary course of nature, that the farther off an *object* were placed, the more confused it should appear. It is certain, the very same perception that now makes us think an *object* approaches, would then have made us to imagine it went farther off. That perception, abstracting from *custom*

and *experience*, being equally fitted to produce the *idea* of great distance, or small distance, or no distance at all.

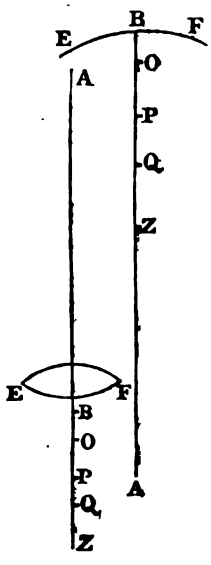
XXVII. *Thirdly*, an *object* being placed at the distance above specified, and brought nearer to the eye, we may nevertheless prevent, at least for some time, the appearance's growing more confused, by straining the eye; in which case, that sensation supplies the place of confused *vision*, in aiding the mind to judge of the distance of the *object*: it being esteemed so much the nearer by how much the effort, or straining of the eye in order to distinct *vision*, is greater.

XXVIII. I have here set down those sensations or *ideas* that seem to me to be the constant and general occasions of introducing into the mind the different *ideas* of near distance. It is true, in most cases, that divers other circumstances contribute to frame our *idea* of distance, viz. the particular number, size, kind, &c. of the things seen: concerning which, as well as all other the forementioned occasions which suggest distance, I shall only observe, they have none of them, in their own nature, any relation or connexion with it: nor is it possible they should ever signify the various degrees therof, otherwise than as by *experience* they have been found to be connected with them.

XXIX. I shall proceed upon these principles to account for a phenomenon which has hitherto strangely puzzled the writers of *optics*, and is so far from being accounted for by any of their *theories* of *vision*, that it is, by their own confession, plainly repugnant to them; and of consequence, if nothing else could be objected, were alone sufficient to bring their credit in question. The whole difficulty I shall lay before you in the words of the learned Doctor Barrow, with which he concludes his Optic Lectures.

"Hæc sunt, quæ circa partem *opticæ* præcipue *mathematicam* dicenda mihi suggessit meditatio. Circa reliquas (quæ φυσικώτεραι sunt, adeoque sæpiuscule pro cer-

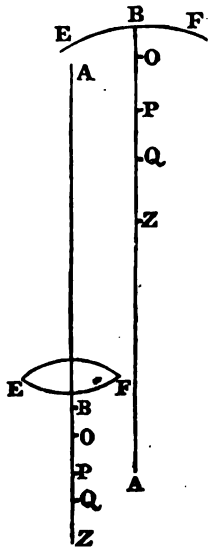
tis principiis plausibiles conjecturas venditare necessum habent) nihil fere quicquam admodum verisimile succurrit, a pervulgatis (ab iis, inquam, quæ Keplerus, Scheinerus, Cartesius, et post illos alii tradiderunt) alienum aut diversum. Atqui tacere malo, quam toties oblatam cramben reponere. Proinde receptui cano; nec ita tamen ut prorsus discedam, anteaquam improbam quandam difficultatem (pro sinceritate quam et vobis et veritati debeo minime dissimulandam) in medium protulero, quæ doctrinæ nostræ, hactenus inculcatæ, se objicit adversam, ab ea saltem nullam admittit solutionem. Illa, breviter, talis est. Lenti vel speculo cavo E B F exponatur punctum visibile A, ita distans, ut radii ex A manantes ex inflectione versus axem A B cogantur. Sitque radiationis limes (seu puncti A imago, qualem supra passim statuimus) punctum Z. Inter hoc autem et inflectentis verticem B uspiam positus concipiatur oculus. Quæri jam potest, ubi loci debeat punctum A apparere? Retrorsum ad punctum Z videri non fert natura (cum omnis impressio sensum afficiens proveniat a partibus A) ac experientia reclamat. Nostris autem e placitis consequi videtur, ipsum ad partes anticas apparens, ab intervallo longissime dissito (quod et maximum sensibile quodvis intervallum quodammodo exsuperet), apparere. Cum enim quo radiis minus divergentibus attingitur objectum, eo (seclusis utique prænotionibus et præjudiciis) longius abesse sentiatur; et quod parallelos ad oculum radios projicit, remotissime positum æstimetur: exigere ratio videtur, ut quod convergentibus radiis apprehenditur, adhuc magis, si fieri posset, quoad apparentiam elongetur Quin et circa casum hunc generatim inquiri possit, quidnam omnino sit, quod apparentem puncti A locum determinet, faciatque quod constanti ratione nunc propius,



nunc remotius appareat? Cui itidem dubio nihil quicquam ex hactenus dictorum analogia responderi posse videtur, nisi debere punctum A perpetuo longissime semotum videri. Verum experientia secus attestatur, illud pro diversa oculi inter puncta B, Z, positione varie distans, nunquam fere (si unquam) longinquius ipso A libere spectato, subinde vero multo propinquius adparere; quinimo, quo oculum appellentes radii magis convergunt, eo speciem objecti propius accedere. Nempe, si puncto B admoveatur oculus, suo (ad lentem) fere nativo in loco conspicitur punctum A (vel æque distans, ad *speculum*;) ad O reductus oculus ejusce speciem appropinquantem cernit; ad P adhuc vicinius ipsum existimat; ac ita sensim, donec alicubi tandem, velut ad Q, constituto oculo objectum summe propinquum apparens, in meram confusionem incipiat evanescere. Quæ sane cuncta rationibus atque decretis nostris repugnare videntur, aut cum iis saltem parum amice conspirant. Neque nostram tantum sententiam pulsat hoc experimentum, at ex æquo cæteras quas norim omnes: veterem imprimis ac vulgatam, nostræ præ reliquis affinem, ita convellere videtur, ut ejus vi coactus doctissimus A. Tacquetus isti principio (cui pene soli totam inædificaverat Catoptricam suam) ceu infido ac inconstanti renunciarit, adeoque suam ipse doctrinam labefactarit? id tamen, opinor, minime facturus, si rem totam inspexisset penitius, atque difficultatis fundum attigisset. Apud me vero non ita pollet hæc, nec eousque præpollebit ulla difficultas, ut ab iis quæ manifeste rationi consentanea video, discedam; præsertim quum, ut hic accidit, ejusmodi difficultas in singularis cujuspiam casus disparitate fundetur. Nimirum in præsente casu peculiare quiddam, naturæ subtilitati involutum, delitescit, ægre fortassis, nisi perfectius explorato videndi modo, detegendum. Circa quod nil, fateor, hactenus excogitare potui, quod adblandiretur animo meo, nedum plane satisfaceret. Vobis itaque nodum hunc, utinam feliciore conatu, resolvendum committo."

In English as follows:

"I have here delivered what my thoughts have suggested to me concerning that part of *optics* which is more properly *mathematical*. As for the other parts of that science (which, being rather *physical*, do consequently abound with plausible conjectures instead of certain principles) there has in them scarce any thing occurred to my observation different from what has been already said by Kepler, Schinerus, Descartes, &c. And methinks I had better say nothing at all, than repeat that which has been so often said by others. I think it therefore high time to take my leave of this subject. But before I quit it for good and all, the fair and ingenuous dealing that I owe both to you and to truth, obliges me to acquaint you with a certain untoward difficulty, which seems directly opposite to the doctrine I have been hitherto inculcating, at least, admits of no solution from it. In short it is this. Before the double convex glass or concave speculum E B F, let the point A be placed at such a distance, that the rays proceeding from A, after refraction or reflection, be brought to unite somewhere in the ax A B. And suppose the point of union (*i. e.* the image of the point A, as hath been already set forth) to be Z; between which and B, the vertex of the glass or speculum, conceive the eye to be any where placed. The question now is, where the point A ought to appear. Experience shews, that it doth not appear behind at the point Z; and it were contrary to nature that it should; since all the impression which affects the sense comes from towards A. But from our tenets it should seem to follow, that it would appear before the eye at a vast distance off, so great as should in some sort surpass all sensible dis-



tance. For since, if we exclude all anticipations and prejudices, every *object* appears by so much the farther off by how much the rays it sends to the eye are less diverging; and that *object* is thought to be most remote from which parallel rays proceed unto the eye; reason would make one think, that *object* should appear at yet a greater distance which is seen by converging rays. Moreover it may in general be asked concerning this case, what it is that determines the apparent place of the point A, and maketh it to appear after a constant manner, sometimes nearer at other times farther off? To which doubt I see nothing that can be answered agreeable to the principles we have laid down, except only that the point A ought always to appear extremely remote. But on the contrary we are assured by experience, that the point A appears variously distant, according to the different situations of the eye between the points B and Z. And that it doth almost never (if at all) seem farther off than it would if it were beheld by the naked eye; but on the contrary it doth sometimes appear much nearer. Nay, it is even certain, that by how much the rays falling on the eye do more converge, by so much the nearer does the *object* seem to approach. For the eye being placed close to the point B, the *object* A appears nearly in its own natural place, if the point B is taken in the glass, or at the same distance, if in the speculum. The eye being brought back to O, the *object* seems to draw near; and being come to P, it beholds it still nearer: and so on by little and little, till at length the eye being placed somewhere, suppose at Q, the *object* appearing extremely near, begins to vanish into mere confusion. All which doth seem repugnant to our principles; at least, not rightly to agree with them. Nor is our tenet alone struck at by this experiment, but likewise all others that ever came to my knowledge are every whit as much endangered by it. The ancient one especially (which is most commonly received, nad comes

nearest to mine) seems to be so effectually overthrown thereby, that the most learned Tacquet has been forced to reject that principle, as false and uncertain, on which alone he had built almost his whole Catoptrics, and consequently by taking away the foundation, hath himself pulled down the superstructure he had raised on it. Which nevertheless I do not believe he would have done, had he but considered the whole matter more thoroughly, and examined the difficulty to the bottom. But as for me, neither this, nor any other difficulty shall have so great an influence on me, as to make me renounce that which I know to be manifestly agreeable to reason. Especially when, as it here falls out, the difficulty is founded in the peculiar nature of a certain odd and particular case. For in the present case something peculiar lies hid, which being involved in the subtilty of nature, will perhaps hardly be discovered till such time as the manner of *vision* is more perfectly made known. Concerning which, I must own, I have hitherto been able to find out nothing that has the least show of *probability*, not to mention *certainty*. I shall therefore leave this knot to be untied by you, wishing you may have better success in it than I have had."

XXX. The ancient and received principle, which Dr. Barrow here mentions as the main foundation of Tacquet's Catoptrics, is, that "every visible point seen by reflection from a *speculum*, shall appear placed at the intersection of the reflected ray and the perpendicular of incidence:" which intersection in the present case happening to be behind the eye, it greatly shakes the authority of that principle whereon the aforementioned author proceeds, throughout his whole Catoptrics, in determining the apparent place of *objects* seen by reflection from any kind of speculum.

XXXI. Let us now see how this phenomenon agrees with our tenets. The eye, the nearer it is placed to the point B in the above figures, the more distinct is the appearance of the *object*: but as it recedes to O, the

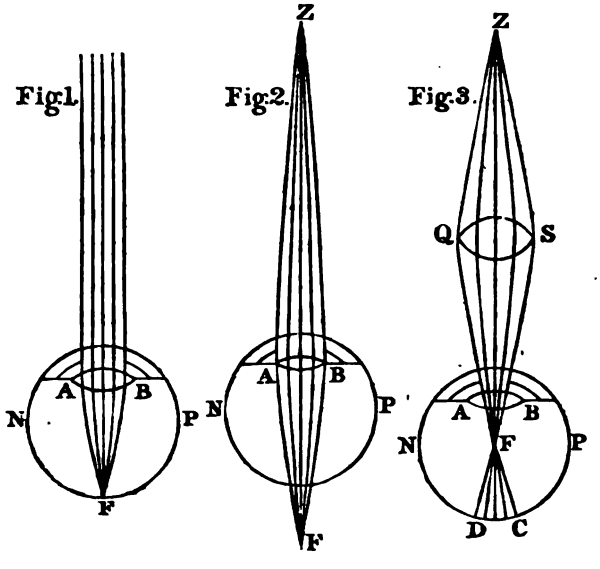
appearance grows more confused; and at P it sees the *object* yet more confused; and so on, till the eye, being brought back to Z, sees the *object* in the greatest confusion of all. Wherefore by sect. xxi. the *object* should seem to approach the eye gradually, as it recedes from the point B, viz, at O it should (in consequence of the principle I have laid down in the aforesaid section) seem nearer than it did at B, and at P nearer than at O, and at Q nearer than at P; and so on, till it quite vanishes at Z. Which is the very matter of fact, as any one that pleases may easily satisfy himself by experiment.

XXXII. This case is much the same, as if we should suppose an Englishman to meet a foreigner who used the same words with the English, but in a direct contrary signification. The Englishman would not fail to make a wrong judgment of the *ideas* annexed to those sounds in the mind of him that used them. Just so in the present case, the *object* speaks (if I may so say) with words that the eye is well acquainted with, viz. confusions of appearance; but whereas, heretofore, the greatest confusions were always wont to signify nearer distances, they have, in this case, a direct contrary signification, being connected with the greater distances. Whence it follows, that the eye must unavoidably be mistaken, since it will take the confusions in the sense it has been used to, which is directly opposed to the true.

XXXIII. This phenomenon, as it entirely subverts the opinion of those who will have us judge of distance by lines and angles, on which supposition it is altogether inexplicable, so it seems to me no small confirmation of the truth of that principle whereby it is explained. But in order to a more full explication of this point, and to shew how far the hypothesis of the mind's judging by the various divergency of rays may be of use in determining the apparent place of an *object*, it will be necessary to premise some few things, which are already well known to those who have any skill in *dioptrics*.

XXXIV. First, Any radiating point is then distinctly seen, when the rays proceeding from it are, by the refractive power of the crystalline, accurately reunited in the *retina*, or fund of the eye. But if they are reunited either before they arrive at the *retina*, or after they have passed it, then there is confused vision.

XXXV. Secondly, Suppose the adjacent figures N P represent an eye duly framed, and retaining its natural figure. In fig. 1. the rays falling nearly parallel on the eye, are, by the crystalline A B, refracted so as their *focus*, or point of union F, falls exactly on the *retina*. But if the rays fall sensibly diverging on the eye, as in fig. 2. then their *focus* falls beyond the *retina*: or if the rays are made to converge by the *lens* Q S, before they come at the eye, as in fig. 3. their *focus* F will fall before the *retina*. In which two last cases, it is



evident from the foregoing section, that the appearance of the point Z is confused. And by how much the

greater is the convergency or divergency of the rays falling on the *pupil*, by so much the farther will the point of their reunion be from the *retina*, either before or behind it, and consequently the point Z will appear by so much the more confused. And this, by the by, may shew us the difference between confused and faint vision. Confused vision is, when the rays proceeding from each distinct point of the *object* are not accurately recollected in one corresponding point on the *retina*, but take up some space thereon. So that rays from different points become mixed and confused together. This is opposed to distinct vision, and attends near *objects*. Faint vision is, when by reason of the distance of the *object*, or grossness of the interjacent *medium*, few rays arrive from the *object* to the eye. This is opposed to vigorous or clear vision, and attends remote *objects*. But to return.

XXXVI. The eye, or (to speak truly) the mind, perceiving only the confusion itself, without ever considering the cause from which it proceeds, doth constantly annex the same degree of distance to the same degree of confusion. Whether that confusion be occasioned by converging or by diverging rays it matters not. Whence it follows, that the eye viewing the object Z through the glass Q S (which, by refraction, causeth the rays Z Q, Z S, &c. to converge) should judge it to be at such a nearness, at which, if it were placed, it would radiate on the eye with rays diverging to that degree as would produce the same confusion, which is now produced by converging rays, *i. e.* would cover a portion of the retina equal to D C. (Vide fig. 3. *supra.)* But then this must be understood (to use Dr. Barrow's phrase) *seclusis prænotionibus et præjudiciis*, in case we abstract from all other circumstances of vision, such as the figure, size, faintness, &c. of the visible objects; all which do ordinarily concur to form our idea of distance, the mind having, by frequent experience, observed their

several sorts or degrees to be connected with various distances.

XXXVII. It plainly follows, from what hath been said, that a person perfectly purblind (*i. e.* that could not see an object distinctly but when placed close to his eye) would not make the same wrong judgment that others do in the forementioned case. For, to him, greater confusions constantly suggesting greater distances, he must, as he recedes from the glass, and the object grows more confused, judge it to be at a farther distance, contrary to what they do who have had the perception of the objects growing more confused, connected with the idea of approach.

XXXVIII. Hence also it doth appear, there may be good use of computation, by lines and angles, in optics; not that the mind judgeth of distance immediately by them, but because it judgeth by somewhat which is connected with them, and to the determination whereof they may be subservient. Thus the mind judging of the distance of an object, by the confusedness of its appearance, and this confusedness being greater or lesser to the naked eye, according as the object is seen by rays more or less diverging, it follows, that a man may make use of the divergency of the rays in computing the apparent distance, though not for its own sake, yet on account of the confusion with which it is connected. But, so it is, the confusion itself is entirely neglected by mathematicians, as having no necessary relation with distance, such as the greater or lesser angles of divergency are conceived to have. And these (especially for that they fall under mathematical computation) are alone regarded, in determining the apparent places of objects, as though they were the sole and immediate cause of the judgments the mind makes of distance. Whereas, as truth, they should not at all be regarded in themselves, or any otherwise than as they are supposed to be the cause of confused vision.

XXXIX. The not considering of this has been a fundamental and perplexing oversight. For proof whereof we need go no farther than the case before us. It having been observed, that the most diverging rays brought into the mind the idea of nearest distance, and that still, as the divergency decreased, the distance increased: and it being thought, the connexion between the various degrees of divergency and distance was immediate, this naturally leads one to conclude, from an ill-grounded analogy, that converging rays shall make an object appear at an immense distance: and that, as the convergency increases, the distance (if it were possible) should do so likewise. That this was the cause of Dr. Barrow's mistake, is evident from his own words, which we have quoted. Whereas, had the learned Doctor observed, that diverging and converging rays, how opposite soever they may seem, do nevertheless agree in producing the same effect, to wit, confusedness of vision, greater degrees whereof are produced indifferently, either as the divergency or convergency of the rays increaseth. And that it is by this effect, which is the same in both, that either the divergency or convergency is perceived by the eye; I say, had he but considered this, it is certain he would have made a quite contrary judgment, and rightly concluded, that those rays which fall on the eye with greater degrees of convergency, should make the object from whence they proceed appear by so much the nearer. But it is plain, it was impossible for any man to attain to a right notion of this matter, so long as he had regard only to lines and angles, and did not apprehend the true nature of vision, and how far it was of mathematical consideration.

XL. Before we dismiss this subject, it is fit we take notice of a query relating thereto, proposed by the ingenious Mr. Molyneux, in his Treatise of Dioptrics,*

* Par. i. prop. 31. sect. ix.

where, speaking of this difficulty, he has these words: "And so he (*i. e.* Dr. Barrow) leaves this difficulty to the solution of others, which I (after so great an example) shall do likewise; but with the resolution of the same admirable author, of not quitting the evident doctrine which we have before laid down, for determining the *locus objecti*, on account of being pressed by one difficulty, which seems inexplicable till a more intimate knowledge of the visive faculty be obtained by mortals. In the mean time, I propose it to the consideration of the ingenuous, whether the *locus apparens* of an object placed as in this ninth section, be not as much before the eye, as the distinct base is behind the eye?" To which query we may venture to answer in the negative. For in the present case, the rule for determining the distance of the distinct base, or respective focus from the glass, is this: *As the difference between the distance of the object and focus is to the focus or focal length, so the distance of the object from the glass is to the distance of the respective focus or distinct base from the glass**. Let us now suppose the object to be placed at the distance of the focal length, and one half of the focal length from the glass, and the eye close to the glass, hence it will follow by the rule, that the distance of the distinct base behind the eye is double the true distance of the object before the eye. If, therefore, Mr. Molyneux's conjecture held good, it would follow, that the eye should see the objeet twice as far off as it really is; and in other cases at three or four times its due distance, or more. But this manifestly contradicts experience, the object never appearing, at farthest, beyond its due distance. Whatever, therefore, is built on this supposition (vide coral. i. prop. 57. ibid.) comes to the ground along with it.

XLI. From what hath been premised, it is a manifest consequence, that a man born blind, being made to

* Molyneux Diopt. par. i. prop. 5.

see, would, at first, have no idea of distance by sight; the sun and stars, the remotest objects, as well as the nearer, would all seem to be in his eye, or rather in his mind. The objects intromitted by sight, would seem to him (as in truth they are) no other than a new set of thoughts or sensations, each whereof is as near to him as the perceptions of pain or pleasure, or the most inward passions of his soul. For our judging objects perceived by sight to be at any distance, or without the mind, is (vide sect. xxviii.) entirely the effect of experience, which one in those circumstances could not yet have attained to.

XLII. It is indeed otherwise upon the common supposition, that men judge of distance by the angle of the optic axis, just as one in the dark, or a blind man by the angle comprehended by two sticks, one whereof he held in each hand. For if this were true, it would follow, that one blind from his birth being made to see, should stand in need of no new experience in order to perceive distance by sight. But that this is false, has, I think, been sufficiently demonstrated.

XLIII. And, perhaps, upon a strict inquiry, we shall not find that even those, who from their birth have grown up in a continued habit of seeing, are irrecoverably prejudiced on the other side, to wit, in thinking what they see to be at a distance from them. For at this time it seems agreed on all hands, by those who have had any thoughts of that matter, that colours, which are the proper and immediate objects of sight, are not without the mind. But then it will be said, by sight we have also the ideas of extension, and figure, and motion; all which may well be thought without and at some distance from the mind, though colour should not. In answer to this, I appeal to any man's experience, whether the visible extension of any object doth not appear as near to him as the colour of that object; nay, whether they do not both seem to be in the very same

place. Is not the extension we see coloured, and is it possible for us, so much as in thought, to separate and abstract colour from extension? Now, where the extension is, there surely is the figure, and there the motion too. I speak of those which are perceived by sight.

XLIV. But for a fuller explication of this point, and to shew that the immediate objects of sight are not so much as the ideas or resemblances of things placed at a distance, it is requisite that we look nearer into the matter, and carefully observe what is meant in common discourse, when one says, that which he sees is at a distance from him. Suppose, for example, that looking at the moon I should say it were fifty or sixty semidiameters of the earth distant from me. Let us see what moon this is spoken of: it is plain it cannot be the visible moon, or any thing like the visible moon, or that which I see, which is only a round luminous plain, of about thirty visible points in diameter. For in case I am carried from the place where I stand directly towards the moon, it is manifest the object varies still as I go on; and by the time that I am advanced fifty or sixty semidiameters of the earth, I shall be so far from being near a small, round, luminous flat, that I shall perceive nothing like it; this object having long since disappeared, and if I would recover it, it must be by going back to the earth from whence I set out. Again, suppose I perceive by sight the faint and obscure idea of something, which I doubt whether it be a man, or a tree, or a tower, but judge it to be at the distance of about a mile; it is plain I cannot mean, that what I see is a mile off, or that it is the image or likeness of any thing which is a mile off, since that, every step I take towards it, the appearance alters, and from being obscure, small, and faint, grows clear, large, and vigorous. And when I come to the mile's end, that which

I saw first is quite lost, neither do I find any thing in the likeness of it.

XLV. In these and the like instances the truth of the matter stands thus: having of a long time experienced certain ideas, perceivable by touch, as distance, tangible figure, and solidity, to have been connected with certain ideas of sight, I do, upon perceiving these ideas of sight, forthwith conclude what tangible ideas are, by the wonted ordinary course of nature, like to follow. Looking at an object I perceive a certain visible figure and colour, with some degree of faintness and other circumstances, which, from what I have formerly observed, determine me to think, that if I advance forward so many paces or miles, I shall be affected with such and such ideas of touch: so that in truth and strictness of speech, I neither see distance itself, nor any thing that I take to be at a distance. I say, neither distance, nor things placed at a distance, are themselves, or their ideas, truly perceived by sight. This I am persuaded of, as to what concerns myself; and, I believe, whoever will look narrowly into his own thoughts, and examine what he means by saying, he sees this or that thing at a distance, will agree with me, that what he sees only, suggests to his understanding, that after having passed a certain distance, to be measured by the motion of his body, which is perceivable by touch, he shall come to perceive such and such tangible ideas which have been usually connected with such and such visible ideas. But that one might be deceived by these suggestions of sense, and that there is no necessary connexion between visible and tangible ideas suggested by them, we need go no farther than the next looking-glass or picture to be convinced. Note, that when I speak of tangible ideas, I take the word idea for any the immediate object of sense, or understanding, in which large signification it is commonly used by the moderns.

XLVI. From what we have shewn, it is a manifest consequence, that the ideas of space, outness, and things placed at a distance, are not, strictly speaking, the object of sight; they are not otherwise perceived by the eye than by the ear. Sitting in my study I hear a coach drive along the street; I look through the casement and see it; I walk out and enter into it; thus, common speech would incline one to think, I heard, saw, and touched, the same thing, to wit, the coach. It is nevertheless certain, the ideas intromitted by each sense are widely different, and distinct from each other; but having been observed constantly to go together, they are spoken of as one and the same thing. By the variation of the noise I perceive the different distances of the coach, and know that it approaches before I look out. Thus, by the ear, I perceive distance, just after the same manner as I do by the eye.

XLVII. I do not nevertheless say, I hear distance in like manner as I say that I see it, the ideas perceived by hearing not being so apt to be confounded with the ideas of touch as those of sight are; so likewise a man is easily convinced that bodies and external things are not properly the object of hearing, but only sounds, by the mediation whereof the idea of this or that body, or distance, is suggested to his thoughts. But then one is with more difficulty brought to discern the difference there is betwixt the ideas of sight and touch: though it be certain, a man no more sees or feels the same thing, than he hears and feels the same thing.

XLVIII. One reason of which seems to be this. It is thought a great absurdity to imagine, that one and the same thing should have any more than one extension, and one figure. But the extension and figure of a body, being let into the mind two ways, and that indifferently, either by sight or touch, it seems to follow that we see the same extension and the same figure which we feel.

XLIX. But if we take a close and accurate view of things, it must be acknowledged that we never see and feel one and the same object. That which is seen is one thing, and that which is felt is another; if the visible figure and extension be not the same with the tangible figure and extension, we are not to infer that one and the same thing has divers extensions. The true consequence is, that the objects of sight and touch are two distinct things. It may, perhaps, require some thought rightly to conceive this distinction. And the difficulty seems not a little increased, because the combination of visible ideas hath constantly the same name as the combination of tangible ideas wherewith it is connected: which doth of necessity arise from the use and end of language.

L. In order, therefore, to treat accurately and unconfusedly of vision, we must bear in mind that there are two sorts of objects apprehended by the eye, the one primarily and immediately, the other secondarily and by intervention of the former. Those of the first sort neither are nor appear to be without the mind, or at any distance off; they may, indeed, grow greater or smaller, more confused or more clear, or more faint, but they do not, cannot approach or recede from us. Whenever we say an object is at a distance, whenever we say it draws near, or goes farther off, we must always mean it of the latter sort, which properly belong to the touch, and are not so truly perceived as suggested by the eye in like manner as thoughts by the ear.

LI. No sooner do we hear the words of a familiar language pronounced in our ears, but the ideas corresponding thereto present themselves to our minds; in the very same instant the sound and the meaning enter the understanding: so closely are they united, that it is not in our power to keep out the one except we exclude the other also. We even act in all respects as if we heard the very thoughts themselves. So likewise the

secondary objects, or those which are only suggested by sight, do often more strongly affect us, and are more regarded, than the proper objects of that sense, along with which they enter into the mind, and with which they have a far more strict connexion than ideas have with words. Hence it is, we find it so difficult to discriminate between the immediate and mediate objects of sight, and are so prone to attribute to the former what belongs only to the latter. They are, as it were, most closely twisted, blended, and incorporated together. And the prejudice is confirmed and rivetted in our thoughts by a long tract of time, by the use of language, and want of reflection. However, I believe any one that shall attentively consider what we have already said and shall say upon this subject before we have done (especially if he pursue it in his own thoughts), may be able to deliver himself from that prejudice. Sure I am, it is worth some attention to whoever would understand the true nature of vision.

LII. I have now done with distance, and proceed to shew how it is, that we perceive by sight the magnitude of objects. It is the opinion of some that we do it by angles, or by angles in conjunction with distance: but neither angles nor distance being perceivable by sight, and the things we see being in truth at no distance from us, it follows, that as we have shewn lines and angles not to be the medium the mind makes use of in apprehending the apparent place, so neither are they the medium whereby it apprehends the apparent magnitude of objects.

LIII. It is well known, that the same extension at a near distance shall subtend a greater angle, and at a farther distance a lesser angle. And by this principle we are told the mind estimates the magnitude of an object, comparing the angle under which it is seen with its distance, and thence inferring the magnitude thereof. What inclines men to this mistake (beside the humour

of making one see by geometry) is, that the same perceptions or ideas which suggest distance, do also suggest magnitude. But if we examine it, we shall find they suggest the latter as immediately as the former. I say, they do not first suggest distance and then leave it to the judgment to use that as a medium whereby to collect the magnitude; but they have as close and immediate a connexion with the magnitude as with the distance; and suggest magnitude as independently of distance, as they do distance independently of magnitude. All which will be evident to whoever considers what hath been already said and what follows.

LIV. It hath been shewn there are two sorts of objects apprehended by sight, each whereof hath its distinct magnitude, or extension; the one properly tangible, *i. e.* to be perceived and measured by touch, and not immediately falling under the sense of seeing: the other, properly and immediately visible, by mediation, of which the former is brought in view. Each of these magnitudes are greater or lesser, according as they contain in them more or fewer points; they being made up of points or minimums. For, whatever may be said of extension in abstract, it is certain, sensible extension is not infinitely divisible. There is a *minimum tangible*, and a *minimum visible*, beyond which sense cannot perceive. This every one's experience will inform him

LV. The magnitude of the object which exists without the mind, and is at a distance, continues always invariably the same: but the visible object still changing as you approach to or recede from the tangible object, it hath no fixed and determinate greatness. Whenever therefore we speak of the magnitude of any thing, for instance, a tree or a house, we must mean the tangible magnitude; otherwise there can be nothing steady and free from ambiguity spoken of it. But though the tangible and visible magnitude in truth belong to two distinct objects, I shall nevertheless (espe-

cially since those objects are called by the same name, and are observed to coexist), to avoid tediousness and singularity of speech, sometimes speak of them as belonging to one and the same thing.

LVI. Now, in order to discover by what means the magnitude of tangible objects is perceived by sight, I need only reflect on what passes in my own mind, and observe what those things be which introduce the ideas of greater or lesser into my thoughts when I look on any object. And these I find to be, first, the magnitude or extension of the visible object, which, being immediately perceived by sight, is connected with that other which, is tangible, and placed at a distance: Secondly, the confusion or distinctness: and, thirdly, the vigorousness or faintness of the aforesaid visible appearance. *Cæteris paribus*, by how much the greater or lesser the visible object is, by so much the greater or lesser do I conclude the tangible object to be. But be the idea immediately perceived by sight never so large, yet if it be withal confused, I judge the magnitude of the thing to be but small: if it be distinct and clear, I judge it greater: and if it be faint, I apprehend it to be yet greater. What is here meant by confusion and faintness, hath been explained in sect. xxxv.

LVII. Moreover, the judgments we make of greatness do, in like manner as those of distance, depend on the disposition of the eye; also on the figure, number, and situation of objects, and other circumstances that have been observed to attend great or small tangible magnitudes. Thus, for instance, the very same quantity of visible extension, which in the figure of a tower doth suggest the idea of great magnitude, shall in the figure of a man suggest the idea of much smaller magnitude. That this is owing to the experience we have had of the usual bigness of a tower and a man, no one, I suppose, need be told.

LVIII. It is also evident, that confusion or faintness

have no more a necessary connexion with little or great magnitude, than they have with little or great distance. As they suggest the latter, so they suggest the former to our minds. And by consequence, if it were not for experience, we should no more judge a faint or confused appearance to be connected with great or little magnitude, than we should that it was connected with great or little distance.

LIX. Nor will it be found, that great or small visible magnitude hath any necessary relation to great or small tangible magnitude; so that the one may certainly be inferred from the other. But, before we come to the proof of this, it is fit we consider the difference there is betwixt the extension and figure which is the proper object of touch, and that other which is termed visible; and how the former is principally, though not immediately, taken notice of, when we look at any object. This has been before mentioned, but we shall here inquire into the cause thereof. We regard the objects that environ us in proportion as they are adapted to benefit or injure our own bodies, and thereby produce in our minds the sensations of pleasure or pain. Now bodies operating on our organs by an immediate application, and the hurt or advantage arising therefrom depending altogether on the tangible, and not at all on the visible, qualities of any object; this is a plain reason why those should be regarded by us much or more than these: and for this end the visive sense seems to have been bestowed on animals, to wit, that by the perception of visible ideas (which in themselves are not capable of affecting or any wise altering the frame of their bodies) they may be able to foresee (from the experience they have had what tangible ideas are connected with such and such visible ideas) the damage or benefit which is likely to ensue upon the application of their own bodies to this or that body which is at a distance: which foresight, how necessary it is to the preservation

of an animal, every one's experience can inform him. Hence it is that when we look at an object, the tangible figure and extension thereof are principally attended to; whilst there is small heed taken of the visible figure and magnitude, which, though more immediately perceived, do less concern us, and are not fitted to produce any alteration in our bodies.

LX. That the matter of fact is true will be evident to any one who considers that a man placed at ten feet distance is thought as great as if he were placed at the distance only of five feet; which is true, not with relation to the visible but tangible greatness of the object: the visible magnitude being far greater at one station than it is at the other.

LXI. Inches, feet, &c. are settled stated lengths, whereby we measure objects, and estimate their magnitude. We say, for example, an object appears to be six inches, or six feet long. Now, that this cannot be meant of visible inches, &c. is evident, because a visible inch is itself no constant determinate magnitude, and cannot therefore serve to mark out and determine the magnitude of any other thing. Take an inch marked upon a ruler; view it successively, at the distance of half a foot, a foot, a foot and a half, &c. from the eye: at each of which, and at all the intermediate distances, the inch shall have a different visible extension, *i. e.* there shall be more or fewer points discerned in it. Now I ask, which of all these various extensions is that stated determinate one that is agreed on for a common measure of other magnitudes? No reason can be assigned why we should pitch on one more than another: and except there be some invariable determinate extension fixed on to be marked by the word inch, it is plain it can be used to little purpose; and to say, a thing contains this or that number of inches, shall imply no more than that it is extended, without bringing any particular idea of that extension into the mind. Farther, an inch and a foot,

from different distances, shall both exhibit the same visible magnitude, and yet at the same time you shall say, that one seems several times greater than the other. From all which it is manifest, that the judgments we make of the magnitude of objects by sight are altogether in reference to their tangible extension. Whenever we say an object is great or small, of this or that determinate measure, I say, it must be meant of the tangible and not the visible extension, which, though immediately perceived, is nevertheless little taken notice of.

LXII. Now, that there is no necessary connexion between these two distinct extensions, is evident from hence; because our eyes might have been framed in such a manner, as to be able to see nothing but what were less than the *minimum tangible*. In which case it is not impossible we might have perceived all the immediate objects of sight the very same that we do now: but unto those visible appearances there would not be connected those different tangible magnitudes that are now. Which shews, the judgments we make of the magnitude of things placed at a distance, from the various greatness of the immediate objects of sight, do not arise from any essential or necessary but only a customary tie which has been observed between them.

LXIII. Moreover, it is not only certain, that any idea of sight might not have been connected with this or that idea of touch which we now observe to accompany it; but also, that the greater visible magnitudes might have been connected with and introduced into our minds lesser tangible magnitudes, and the lesser visible magnitudes greater tangible magnitudes. Nay, that it actually is so, we have daily experience; that object which makes a strong and large appearance not seeming near so great as another the visible magnitude whereof is much less, but more faint, and the appearance upper, or which is the same thing painted lower on

the *retina*, which faintness and situation suggest both greater magnitude and greater distance.

LXIV. From which, and from sect. lvii. and lviii. it is manifest, that as we do not perceive the magnitudes of objects immediately by sight, so neither do we perceive them by the mediation of any thing which has a necessary connexion with them. Those ideas that now suggest unto us the various magnitudes of external objects before we touch them, might possibly have suggested no such thing: or they might have signified them in a direct contrary manner; so that the very same ideas, on the perception whereof we judge an object to be small, might as well have served to make us conclude it great; those ideas being in their own nature equally fitted to bring into our minds the idea of small or great, or no size at all, of outward objects; just as the words of any language are in their own nature indifferent to signify this or that thing, or nothing at all.

LXV. As we see distance so we see magnitude. And we see both in the same way that we see shame or anger in the looks of a man. Those passions are themselves invisible: they are nevertheless let in by the eye along with colours and alterations of countenance, which are the immediate object of vision, and which signify them for no other reason, than barely because they have been observed to accompany them: without which experience we should no more have taken blushing for a sign of shame than of gladness.

LXVI. We are nevertheless exceedingly prone to imagine those things, which are perceived only by the mediation of others, to be themselves the immediate objects of sight; or, at least, to have in their own nature a fitness to be suggested by them, before ever they had been experienced to coexist with them. From which prejudice every one, perhaps, will not find it easy to emancipate himself, by any the clearest convictions

of reason. And there are some grounds to think, that if there was one only invariable and universal language in the world, and that men were born with the faculty of speaking it, it would be the opinion of many, that the ideas in other men's minds were properly perceived by the ear, or had at least a necessary and inseparable tie with the sounds that were affixed to them. All which seems to arise from a want of a due application of our discerning faculty, thereby to discriminate between the ideas that are in our understandings, and consider them apart from each other; which would preserve us from confounding those that are different, and make us see what ideas do, and what do not, include or imply this or that idea.

LXVII. There is a celebrated phenomenon the solution whereof I shall attempt to give by the principles that have been laid down, in reference to the manner wherein we apprehend by sight the magnitude of objects. The apparent magnitude of the moon, when placed in the horizon, is much greater than when it is in the meridian; though the angle under which the diameter of the moon is seen be not observed greater in the former case than in the latter: and the horizontal moon doth not constantly appear of the same bigness, but at some times seemeth far greater than at others.

LXVIII. Now in order to explain the reason of the moon's appearing greater than ordinary in the horizon, it must be observed, that the particles which compose our atmosphere intercept the rays of light proceeding from any object to the eye; and by how much the greater is the portion of atmosphere interjacent between the object and the eye, by so much the more are the rays intercepted; and by consequence, the appearance of the object rendered more faint, every object appearing more vigorous or more faint, in proportion as it sendeth more or fewer rays into the eye.

Now, between the eye and the moon, when situated in the horizon, there lies a far greater quantity of atmosphere than there does when the moon is in the meridian. Whence it comes to pass, that the appearance of the horizontal moon is fainter, and therefore by sect. lvi. it should be thought bigger in that situation than in the meridian, or in any other elevation above the horizon.

LXIX. Farther, the air being variously impregnated, sometimes more and sometimes less, with vapours and exhalations fitted to retund and intercept the rays of light, it follows, that the appearance of the horizontal moon hath not always an equal faintness, and by consequence, that luminary, though in the very same situation, is at one time judged greater than at another.

LXX. That we have here given the true account of the phenomena of the horizontal moon, will, I suppose, be farther evident to any one from the following considerations. *First*, it is plain, that which in this case suggests the idea of greater magnitude, must be something which is itself perceived; for, that which is unperceived cannot suggest to our perception any other thing. *Secondly*, it must be something that does not constantly remain the same, but is subject to some change or variation, since the appearance of the horizontal moon varies, being at one time greater than at another. And yet, *Thirdly*, it cannot be the visible figure or magnitude, since that remains the same, or is rather lesser, by how much the moon is nearer to the horizon. It remains therefore, that the true cause is that affection or alteration of the visible appearance, which proceeds from the greater paucity of rays arriving at the eye, and which I term faintness: since this answers all the forementioned conditions, and I am not conscious of any other perception that doth.

LXXI. Add to this, that in misty weather, it is a common observation, that the appearance of the hori-

zontal moon is far larger than usual, which greatly conspires with and strengthens our opinion. Neither would it prove in the least irreconcilable with what we have said, if the horizontal moon should chance sometimes to seem enlarged beyond its usual extent, even in more serene weather. For we must not only have regard to the mist, which happens to be in the place where we stand; we ought also to take into our thoughts the whole sum of vapours and exhalations which lies betwixt the eye and the moon: all which co-operating to render the appearance of the moon more faint, and thereby increase its magnitude, it may chance to appear greater than it usually does, even in the horizontal position, at a time when though there be no extraordinary fog or haziness just in the place where we stand; yet the air between the eye and the moon, taken altogether, may be loaded with a greater quantity of interspersed vapours and exhalations than at other times.

LXXII. It may be objected, that in consequence of our principles, the interposition of a body in some degree opaque, which may intercept a great part of the rays of light, should render the appearance of the moon in the meridian as large as when it is viewed in the horizon. To which I answer, it is not faintness any how applied that suggests greater magnitude, there being no necessary but only an experimental connexion between those two things: it follows, that the faintness, which enlarges the appearance, must be applied in such sort, and with such circumstances, as have been observed to attend the vision of great magnitudes. When from a distance we behold great objects, the particles of the intermediate air and vapours, which are themselves unperceivable, do interrupt the rays of light, and thereby render the appearance less strong and vivid; now, faintness of appearance caused in this sort hath been experienced to coexist with great magnitude. But when it is caused by the interposition of an opaque sensible body,

this circumstance alters the case, so that a faint appearance this way caused, doth not suggest greater magnitude, because it hath not been experienced to coexist with it.

LXXIII. Faintness, as well as all other ideas or perceptions which suggest magnitude or distance, doth it in the same way that words suggest the notions to which they are annexed. Now it is known, a word pronounced with certain curcumstances, or in a certain context with other words, hath not always the same import and signification that it hath when pronounced in some other circumstances, or different context of words. The very same visible appearance as to faintness and all other respects, if placed on high, shall not suggest the same magnitude that it would if it were seen at an equal distance on a level with the eye. The reason whereof is, that we are rarely accustomed to view objects at a great height; our concerns lie among things situated rather before than above us; and accordingly our eyes are not placed on the top of our heads, but in such a position as is most convenient for us to see distant objects standing in our way; and this situation of them being a circumstance which usually attends the vision of distant objects, we may from hence account for (what is commonly observed) an object's appearing of different magnitude, even with respect to its horizontal extension, on the top of a steeple, for example, a hundred feet high, to one standing below, from what it would if placed at a hundred feet distance on a level with his eye. For it hath been shewn, that the judgment we make on the magnitude of a thing depends not on the visible appearance alone, but also on divers other circumstances, any one of which being omitted or varied may suffice to make some alteration in our judgment. Hence the circumstance of viewing a distant object in such a situation as is usual, and suits with the ordinary posture of the head and eyes being omitted, and instead thereof a different

situation of the object, which requires a different posture of the head taking place, it is not to be wondered at, if the magnitude be judged different; but it will be demanded, why a high object should constantly appear less than an equidistant low object of the same dimensions, for so it is observed to be; it may indeed be granted that the variation of some circumstances may vary the judgment made on the magnitude of high objects, which we are less used to look at: but it does not hence appear why they should be judged less rather than greater. I answer, that in case the magnitude of distant objects was suggested by the extent of their visible appearance alone, and thought proportional thereto, it is certain they would then be judged much less than now they seem to be. (Vide sect. lxxix.) But several circumstances concurring to form the judgment we make on the magnitude of distant objects, by means of which they appear far larger than others whose visible appearance hath an equal or even greater extension; it follows, that upon the change or omission of any of those circumstances which are wont to attend the vision of distant objects, and so come to influence the judgments made on their magnitude, they shall proportionably appear less than otherwise they would. For any of those things that caused an object to be thought greater than in proportion to its visible extension, being either omitted, or applied without the usual circumstances, the judgment depends more entirely on the visible extension, and consequently the object must be judged less. Thus in the present case, the situation of the thing seen being different from what it usually is in those objects we have occasion to view, and whose magnitude we observe, it follows, that the very same object being a hundred feet high, should seem less than if it was a hundred feet off on (or nearly on) a level with the eye. What has been here set forth, seems tome to have no small share in contributing to magnify the appearance of the horizontal

moon, and deserves not to be passed over in the explication of it.

LXXIV. If we attentively consider the phenomenon before us, we shall find the not discerning between the mediate and immediate objects of sight to be the chief cause of the difficulty that occurs in the explication of it. The magnitude of the visible moon, or that which is the proper and immediate object of vision, is no greater when the moon is in the horizon, than when it is in the meridian. How comes it therefore, to seem greater in one situation than the other? What is it can put this cheat on the understanding? It has no other perception of the moon than what it gets by sight: and that which is seen is of the same extent, I say, the visible appearance hath the same or rather a less magnitude, when the moon is viewed in the horizontal than when in the meridional position: and yet it is esteemed greater in the former than in the latter. Herein consists the difficulty, which doth vanish and admit of a most easy solution, if we consider, that as the visible moon is not greater in the horizon than in the meridian, so neither is it thought to be so. It hath been already shewn, that in any act of vision, the visible object absolutely, or in itself, is little taken notice of, the mind still carrying its view from that to some tangible ideas, which have been observed to be connected with it, and by that means come to be suggested by it. So that when a thing is said to appear great or small, or whatever estimate be made of the magnitude of any thing, this is meant not of the visible but of the tangible object. This duly considered, it will be no hard matter to reconcile the seeming contradiction there is, that the moon should appear of a different bigness, the visible magnitude thereof remaining still the same. For by sect. lvi. the very same visible extension, with a different faintness, shall suggest a different tangible extension. When therefore the horizontal moon is said to appear greater than the meridional moon, this must

be understood, not of a greater visible extension, but of a greater tangible or real extension, which by reason of the more-than-ordinary faintness of the visible appearance, is suggested to the mind along with it.

LXXV. Many attempts have been made by learned men to account for this appearance. Gassendus, Descartes, Hobbes, and several others, have employed their thoughts on that subject; but how fruitless and unsatisfactory their endeavours have been, is sufficiently shewn in The Philosophical Transactions*, where you may see their several opinions at large set forth and confuted, not without some surprise at the gross blunders that ingenious men have been forced into, by endeavouring to reconcile this appearance with the ordinary principles of optics. Since the writing of which, there hath been published in the Transactions† another paper relating to the same affair, by the celebrated Dr. Wallis, wherein he attempts to account for that phenomenon, which, though it seems not to contain any thing new, or different from what had been said before by others, I shall nevertheless consider in this place.

LXXVI. His opinion, in short, is this: We judge not of the magnitude of an object by the visual angle alone, but by the visual angle in conjunction with the distance. Hence, though the angle remain the same, or even become less, yet if withal the distance seem to have been increased, the object shall appear greater. Now, one way whereby we estimate the distance of any thing, is by the number and extent of the intermediate objects: when therefore the moon is seen in the horizon, the variety of fields, houses, &c. together with the large prospect of the wide extended land or sea, that lies between the eye and the utmost limb of the horizon, suggest unto the mind the idea of greater distance, and consequently magnify the appearance. And this, according to Dr. Wallis, is the true account of the extraordi-

* Phil. Trans. Num. 187. p. 314. † Num. 187. p. 323.

nary largeness attributed by the mind to the horizontal moon, at a time when the angle subtended by its diameter is not one jot greater than it used to be.

LXXVII. With reference to this opinion, not to repeat what hath been already said concerning distance, I shall only observe, first, that if the prospect of interjacent objects be that which suggests the idea of farther distance, and this idea of farther distance be the cause that brings into the mind the idea of greater magnitude, it should hence follow, that if one looked at the horizontal moon from behind a wall, it would appear no bigger than ordinary. For, in that case, the wall interposing cuts off all that prospect of sea and land, &c. which might otherwise increase the apparent distance, and thereby the apparent magnitude of the moon. Nor will it suffice to say, the memory doth even then suggest all that extent of land, &c. which lies within the horizon; which suggestion occasions a sudden judgment of sense, that the moon is farther off and larger than usual. For ask any man, who from such a station beholding the horizontal moon shall think her greater than usual, whether he hath at that time in his mind any idea of the intermediate objects, or long tract of land that lies between his eye and the extreme edge of the horizon? And whether it be that idea which is the cause of his making the aforementioned judgment? He will, I suppose, reply in the negative, and declare, the horizontal moon shall appear greater than the meridional, though he never thinks of all or any of those things that lie between him and it. Secondly, it seems impossible, by this hypothesis, to account for the moon's appearing, in the very same situation, at one time greater than at another; which, nevertheless, has been shewn to be very agreeable to the principles we have laid down, and receives a most easy and natural explication from them. For the further clearing up of this point, it is to be observed, that what we immediately and properly see,

are only lights and colours in sundry situations and shades, and degrees of faintness and clearness, confusion and distinctness. All which visible objects are only in the mind; nor do they suggest aught external, whether distance or magnitude, otherwise than by habitual connexion, as words do things. We are also to remark, that, beside the straining of the eyes, and beside the vivid and faint, the distinct and confused appearances (which bearing some proportion to lines and angles, have been substituted instead of them, in the foregoing part of this Treatise), there are other means which suggest both distance and magnitude; particularly, the situation of visible points, or objects, as upper or lower; the former suggesting a farther distance and greater magnitude, the latter a nearer distance and lesser magnitude: all which is an effect only of custom and experience; there being really nothing intermediate in the line of distance, between the uppermost and lowermost, which are both equidistant, or rather at no distance from the eye, as there is also nothing in upper or lower which by necessary connexion should suggest greater or lesser magnitude. Now, as these customary experimental means of suggesting distance do likewise suggest magnitude, so they suggest the one as immediately as the other. I say, they do not (vide sect. liii.) first suggest distance, and then leave the mind from thence to infer or compute magnitude, but suggest magnitude as immediately and directly as they suggest distance.

LXXVIII. This phenomenon of the horizontal moon is a clear instance of the insufficiency of lines and angles for explaining the way wherein the mind perceives and estimates the magnitude of outward objects. There is, nevertheless, a use of computation by them, in order to determine the apparent magnitude of things, so far as they have a connexion with and are proportional to those other ideas or perceptions which are the true and immediate occasions that suggest to the mind the appa-

rent magnitude of things. But this in general may, I think, be observed concerning mathematical computation in optics: that it can never be very precise and exact, since the judgments we make of the magnitude of external things do often depend on several circumstances, which are not proportionable to or capable of being defined by lines and angles.

LXXIX. From what has been said we may safely deduce this consequence, to wit, that a man born blind, and made to see, would, at first opening of his eyes, make a very different judgment of the magnitude of objects intromitted by them from what others do. He would not consider the ideas of sight with reference to or as having any connexion with the ideas of touch: his view of them being entirely terminated within themselves, he can no otherwise judge them great or small than as they contain a greater or lesser number of visible points. Now, it being certain that any visible point can cover or exclude from view only one other visible point, it follows, that whatever object intercepts the view of another hath an equal number of visible points with it; and, consequently, they shall both be thought by him to have the same magnitude. Hence, it is evident, one in those circumstances would judge his thumb, with which he might hide a tower, or hinder its being seen, equal to that tower; or his hand, the interposition whereof might conceal the firmament from his view, equal to the firmament: how great an inequality soever there may, in our apprehensions, seem to be betwixt those two things, because of the customary and close connexion that has grown up in our minds between the objects of sight and touch, whereby the very different and distinct ideas of those two senses are so blended and confounded together as to be mistaken for one and the same thing; out of which prejudice we cannot easily extricate ourselves.

LXXX. For the better explaining the nature of

vision, and setting the manner wherein we perceive magnitudes in a due light, I shall proceed to make some observations concerning matters relating thereto, whereof the want of reflection, and duly separating between tangible and visible ideas, is apt to create in us mistaken and confused notions. And, first, I shall observe, that the *minimum visibile* is exactly equal in all beings whatsoever that are endowed with the visive faculty. No exquisite formation of the eye, no peculiar sharpness of sight, can make it less in one creature than in another; for it not being distinguishable into parts, nor in any wise consisting of them, it must necessarily be the same to all. For suppose it otherwise, and that the *minimum visibile* of a mite, for instance, be less than the *minimum visibile* of a man; the latter, therefore, may, by detraction of some part, be made equal to the former: it doth, therefore, consist of parts, which is inconsistent with the notion of a *minimum visibile*, or point.

LXXXI. It will, perhaps, be objected, that the *minimum visibile* of a man doth really and in itself contain parts whereby it surpasses that of a mite, though they are not perceivable by the man. To which I answer, the *minimum visibile* having (in like manner as all other the proper and immediate objects of sight) been shewn not to have any existence without the mind of him who sees it, it follows there cannot be any part of it that is not exactly perceived, and therefore visible. Now for any object to contain several distinct visible parts, and at the same time to be a *minimum visibile*, is a manifest contradiction.

LXXXII. Of these visible points we see at all times an equal number. It is every whit as great when our view is contracted and bounded by near objects, as when it is extended to larger and remoter. For it being impossible that one *minimum visibile* should obscure or keep out of sight more than one another, it is a plain consequence, that when my view is on all sides bounded

by the walls of my study, I see just as many visible points as I could, in case, that by the removal of the study-walls, and all other obstructions, I had a full prospect of the circumjacent fields, mountains, sea, and open firmament; for so long as I am shut up within the walls, by their interposition, every point of the external objects is covered from my view: but each point that is seen being able to cover or exclude from sight one only other corresponding point, it follows, that whilst my sight is confined to those narrow walls, I see as many points, or *minima visibilia*, as I should were those walls away, by looking on all the external objects whose prospect is intercepted by them. Whenever therefore we are said to have greater prospect at one time than another, this must be understood with relation, not to the proper and immediate, but the secondary and mediate objects of vision, which, as hath been shewn, properly belong to the touch.

LXXXIII. The visive faculty considered, with reference to its immediate objects, may be found to labour of two defects: First, in respect of the extent or number of visible points that are at once perceivable by it, which is narrow and limited to a certain degree. It can take in at view but a certain determinate number of *minima visibilia*, beyond which it cannot extend its prospect. Secondly, our sight is defective in that its view is not only narrow, but also for the most part confused; of those things that we take in at one prospect, we can see but a few at once clearly and unconfusedly; and the more we fix our sight on any one object, by so much the darker and more indistinct shall the rest appear.

LXXXIV. Corresponding to these two defects of sight, we may imagine as many perfections, to wit, 1st. That of comprehending in one view a greater number of visible points. 2dly. Of being able to view them all equally and at once, with the utmost clearness and

distinction. That those perfections are not actually in some intelligences of a different order and capacity from ours, it is impossible for us to know.

LXXXV. In neither of those two ways do microscopes contribute to the improvement of sight; for when we look through a microscope, we neither see more visible points, nor are the collateral points more distinct than when we look with the naked eye, at objects placed in a due distance. A microscope brings us, as it were, into a new world: it presents us with a new scene of visible objects quite different from what we behold with the naked eye. But herein consists the most remarkable difference, to wit, that whereas the objects perceived by the eye alone, have a certain connexion with tangible objects, whereby we are taught to foresee what will ensue upon the approach or application of distant objects to the parts of our body, which much conduceth to its preservation; there is not the like connexion between things tangible and those visible objects that are perceived by help of a fine microscope.

LXXXVI. Hence it is evident, that were our eyes turned into the nature of microscopes, we should not be much benefited by the change; we should be deprived of the forementioned advantage we at present receive by the visive faculty; and have left us only the empty amusement of seeing, without any other benefit arising from it. But in that case it will, perhaps, be said, our sight would be endued with a far greater sharpness and penetration than it now hath. But I would fain know wherein consists that sharpness which is esteemed so great an excellency of sight. It is certain, from what we have already shewn, that the *minimum visibile* is never greater or lesser, but in all cases constantly the same: and in the case of microscopical eyes, I see only this difference, to wit, that upon the ceasing of a certain observable connexion betwixt the divers perceptions of sight and touch, which before enabled us to

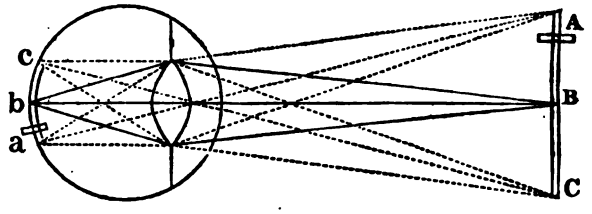
regulate our actions by the eye, it would now be rendered utterly unserviceable to that purpose.

LXXXVII. Upon the whole, it seems that if we consider the use and end of sight, together with the present state and circumstances of our being, we shall not find any great cause to complain of any defect or imperfection in it, or easily conceive how it could be mended. With such admirable wisdom is that faculty contrived, both for the pleasure and convenience of life.

LXXXVIII. Having finished what I intended to say concerning the distance and magnitude of objects, I come now to treat of the manner wherein the mind perceives by sight their situation. Among the discoveries of the last age, it is reputed none of the least, that the manner of vision hath been more clearly explained than ever it had been before. There is, at this day, no one ignorant, that the pictures of external objects are painted on the *retina*, or fund of the eye. That we can see nothing which is not so painted: and that, according as the picture is more distinct or confused, so also is the perception we have of the object: but then, in this explication of vision, there occurs one mighty difficulty. The objects are painted in an inverted order on the bottom of the eye: the upper part of any object being painted on the lower part of the eye, and the lower part of the object on the upper part of the eye: and so also as to right and left. Since, therefore, the pictures are thus inverted, it is demanded how it comes to pass that we see the objects erect and in their natural posture?

LXXXIX. In answer to this difficulty we are told, that the mind, perceiving an impulse of a ray of light on the upper part of the eye, considers this ray as coming in a direct line from the lower part of the object, and, in like manner, tracing the ray that strikes on the lower part of the eye, it is directed to the upper part of the

object. Thus, in the adjacent figure C, the lower point of the object A B C is projected on *c* the upper part of the eye. So likewise, the highest point A is projected on *a* the lowest part of the eye, which makes the repre-



sentation *c b a* inverted: but the mind, considering the stroke that is made on *c* as coming in the straight line C *c* from the lower end of the object; and the stroke or impulse on *a*, as coming in the line A *a* from the upper end of the object, is directed to make a right judgment of the situation of the object A B C, notwithstanding the picture of it is inverted. This is illustrated by conceiving a blind man, who, holding in his hands two sticks that cross each other, doth, with them, touch the extremities of an object, placed in a perpendicular situation. It is certain, this man will judge that to be the upper part of the object which he touches with the stick held in the undermost hand, and that to be the lower part of the object which he touches with the stick in his uppermost hand. This is the common explication of the erect appearance of objects, which is generally received and acquiesced in, being (as Mr. Molyneux tells us*) *allowed by all men as satisfactory.*

XC. But this account to me does not seem in any degree true. Did I perceive those impulses, decussations, and directions of the rays of light, in like manner as hath been set forth, then, indeed, it would not, at first view, be altogether void of probability. And there might be some pretence for the comparison of the blind man and his cross sticks. But the case is far other-

* Diopt. par. ii. c. vii. p. 289.

wise. I know, very well, that I perceive no such thing. And of consequence, I cannot thereby make an estimate of the situation of objects. I appeal to any one's experience, whether he be conscious to himself, that he thinks on the intersection made by the radius pencils, or pursues the impulses they give in right lines, whenever he perceives by sight the position of any object? To me it seems evident, that crossing and tracing of the rays, is never thought on by children, idiots, or, in truth, by any other, save only those who have applied themselves to the study of optics. And for the mind to judge of the situation of objects by those things, without perceiving them, or to perceive them without knowing it, is equally beyond my comprehension. Add to this, that the explaining the manner of vision by the example of cross sticks, and hunting for the object along the axes of the radius pencils, doth suppose the proper objects of sight to be perceived at a distance from us, contrary to what hath been demonstrated.

XCI. It remains, therefore, that we look for some other explication of this difficulty; and I believe it not impossible to find one, provided we examine it to the bottom, and carefully distinguish between the ideas of sight and touch; which cannot be too oft inculcated in treating of vision: but more especially throughout the consideration of this affair we ought to carry that distinction in our thoughts: for that, from want of a right understanding thereof, the difficulty of explaining erect vision seems chiefly to arise.

XCII. In order to disentangle our minds from whatever prejudices we may entertain with relation to the subject in hand, nothing seems more apposite, than the taking into our thoughts the case of one born blind, and afterwards, when grown up, made to see. And though perhaps it may not be an easy task to divest ourselves entirely of the experience received from sight, so as to be able to put our thoughts exactly in the pos-

ture of such a one's; we must, nevertheless, as far as possible, endeavour to frame true conceptions of what might reasonably be supposed to pass in his mind.

XCIII. It is certain, that a man actually blind, and who had continued so from his birth, would, by the sense of feeling, attain to have ideas of upper and lower. By the motion of his hand he might discern the situation of any tangible object placed within his reach. That part on which he felt himself supported, or towards which he perceived his body to gravitate, he would term lower, and the contrary to this upper; and accordingly denominate whatsoever objects he touched.

XCIV. But then, whatever judgments he makes concerning the situation of objects, are confined to those only that are perceivable by touch. All those things that are intangible, and of a spiritual nature, his thoughts and desires, his passions, and, in general, all the modifications of his soul, to these he would never apply the terms upper and lower, except only in a metaphorical sense. He may, perhaps, by way of allusion, speak of high or low thoughts: but those terms, in their proper signification, would never be applied to any thing that was not conceived to exist without the mind. For a man born blind, and remaining in the same state, could mean nothing else by the words higher and lower, than a greater or lesser distance from the earth: which distance he would measure by the motion or application of his hand, or some other part of his body. It is, therefore, evident, that all those things which, in respect of each other, would, by him, be thought higher or lower, must be such as were conceived to exist without his mind, in the ambient space.

XCV. Whence it plainly follows, that such a one, if we suppose him made to see, would not, at first sight, think, that any thing he saw was high or low, erect or inverted; for it hath been already demonstrated in sect. xli. that he would not think the things he perceived by

sight to be at any distance from him, or without his mind. The objects to which he had hitherto been used to apply the terms up and down, high and low, were such only as affected or were some way perceived by his touch: but the proper objects of vision make a new set of ideas, perfectly distinct and different from the former, and which can in no sort make themselves perceived by touch. There is, therefore, nothing at all that could induce him to think those terms applicable to them: nor would he ever think it, till such time as he had observed their connexion with tangible objects, and the same prejudices began to insinuate themselves into his understanding, which, from their infancy, had grown up in the understandings of other men.

XCVI. To set this matter in a clearer light, I shall make use of an example. Suppose the abovementioned blind person, by his touch, perceives a man to stand erect. Let us inquire into the manner of this. By the application of his hand to the several parts of a human body, he had perceived different tangible ideas, which being collected into sundry complex ones have distinct names annexed to them. Thus one combination of a certain tangible figure, bulk, and consistency of parts, is called the head, another the hand, a third the foot, and so of the rest: all which complex ideas could in his understanding be made up only of ideas perceivable by touch. He had also by his touch obtained an idea of earth or ground, towards which he perceives the parts of his body to have a natural tendency. Now by erect, nothing more being meant, than that perpendicular position of a man, wherein his feet are nearest to the earth: if the blind person, by moving his hand over the parts of the man who stands before him, perceives the tangible ideas that compose the head to be farthest from, and those that compose the feet to be nearest to, that other combination of tangible ideas which he calls earth, he will denominate

that man erect. But if we suppose him on a sudden to receive his sight, and that he behold a man standing before him, it is evident, in that case, he would neither judge the man he sees to be erect nor inverted; for he, never having known those terms applied to any other save tangible things, or which existed in the space without him, and what he sees neither being tangible, nor perceived as existing without, he could not know that in propriety of language they were applicable to it.

XCVII. Afterwards, when upon turning his head or eyes up and down to the right and left, he shall observe the visible objects to change, and shall also attain to know, that they are called by the same names, and connected with the objects perceived by touch; then, indeed, he will come to speak of them and their situation in the same terms that he has been used to apply to tangible things: and those that he perceives by turning up his eyes he will call upper, and those that by turning down his eyes he will call lower.

XCVIII. And this seems to me the true reason why he should think those objects uppermost that are painted on the lower part of his eye: for by turning the eye up they shall be distinctly seen; as likewise those that are painted on the highest part of the eye shall be distinctly seen by turning the eye down, and are for that reason esteemed lowest: for we have shewn, that to the immediate objects of sight, considered in themselves, he would not attribute the terms high and low. It must therefore be on account of some circumstances, which are observed to attend them: and these, it is plain, are the actions of turning the eye up and down, which suggest a very obvious reason why the mind should denominate the objects of sight accordingly high or low. And without this motion of the eye, this turning it up and down in order to discern different objects, doubtless erect, inverse, and other the like terms relating to the position of tangible objects, would never have been transferred, or in any degree ap-

prehended to belong to the ideas of sight: the mere act of seeing including nothing in it to that purpose; whereas the different situations of the eye naturally direct the mind to make a suitable judgment of the situation of objects intromitted by it.

XCIX. Farther, when he has by experience learnt the connexion there is between the several ideas of sight and touch, he will be able, by the perception he has of the situation of visible things in respect of one another, to make a sudden and true estimation of the situation of outward, tangible things corresponding to them. And thus it is he shall perceive by sight the situation of external objects, which do not properly fall under that sense.

C. I know we are very prone to think, that if just made to see, we should judge of the situation of visible things as we do now: but, we are also as prone to think, that at first sight we should in the same way apprehend the distance and magnitude of objects, as we do now: which hath been shewn to be a false and groundless persuasion. And for the like reasons, the same censure may be passed on the positive assurance that most men, before they have thought sufficiently of the matter, might have of their being able to determine by the eye at first view, whether objects were erect or inverse.

CI. It will perhaps be objected to our opinion, that a man, for instance, being thought erect when his feet are next the earth, and inverted when his head is next the earth, it doth hence follow, that by the mere act of vision, without any experience or altering the situation of the eye, we should have determined whether he were erect or inverted: for both the earth itself, and the limbs of the man who stands thereon, being equally perceived by sight, one cannot choose seeing, what part of the man is nearest the earth, and what part farthest from it, *i. e.* whether he be erect or inverted.

CII. To which I answer, the ideas which constitute

the tangible earth and man are entirely different from those which constitute the visible earth and man. Nor was it possible, by virtue of the visive faculty alone, without superadding any experience of touch, or altering the position of the eye, ever to have known, or so much as suspected, there had been any relation or connexion between them: hence a man at first view would not denominate any thing he saw, earth, or head, or foot; and consequently, he could not tell, by the mere act of vision, whether the head or feet were nearest the earth: nor, indeed, would we have thereby any thought of earth or man, erect or inverse, at all: which will be made yet more evident, if we nicely observe, and make a particular comparison between, the ideas of both senses.

CIII. That which I see is only variety of light and colours. That which I feel is hard or soft, hot or cold, rough or smooth. What similitude, what connexion, have those ideas with these? Or how is it possible, that any one should see reason to give one and the same name to combinations of ideas so very different, before he had experienced their coexistence? We do not find there is any necessary connexion betwixt this or that tangible quality, and any colour whatsoever. And we may sometimes perceive colours, where there is nothing to be felt. All which doth make it manifest, that no man, at first receiving of his sight, would know there was any agreement between this or that particular object of his sight, and any object of touch he had been already acquainted with; the colours therefore of the head would to him no more suggest the idea of head than they would the idea of foot.

CIV. Farther, we have at large shewn, (vide sect. lxiii. and lxiv.) there is no discoverable necessary connexion between any given visible magnitude and any one particular tangible magnitude; but that it is entirely the result of custom and experience, and depends on foreign and accidental circumstances, that

we can by the perception of visible extension inform ourselves, what may be the extension of any tangible object connected with it. Hence it is certain, that neither the visible magnitude of head or foot would bring along with them into the mind, at first opening of the eyes, the respective tangible magnitudes of those parts.

CV. By the foregoing section, it is plain the visible figure of any part of the body hath no necessary connexion with the tangible figure thereof, so as at first sight to suggest it to the mind: for figure is the termination of magnitude, whence it follows, that no visible magnitude, having in its own nature an aptness to suggest any one particular tangible magnitude, so neither can any visible figure be inseparably connected with its corresponding tangible figure: so as of itself and in a way prior to experience, it might suggest it to the understanding. This will be farther evident, if we consider that what seems smooth and round to the touch, may to sight, if viewed through a microscope, seem quite otherwise.

CVI. From all which, laid together and duly considered, we may clearly deduce this inference. In the first act of vision, no idea entering by the eye would have a perceivable connexion with the ideas to which the names earth, man, head, foot, &c. were annexed in the understanding of a person blind from his birth; so as in any sort to introduce them into his mind, or make themselves be called by the same names, and reputed the same things with them, as afterwards they come to be.

CVII. There doth, nevertheless, remain one difficulty, which perhaps may seem to press hard on our opinion, and deserve not to be passed over: for though it be granted that neither the colour, size, nor figure, of the visible feet, have any necessary connexion with the ideas that compose the tangible feet, so as to bring them at first sight into my mind, or make me in danger of confounding them before I had been used to and for some time experienced their connexion; yet thus much seems

undeniable, namely, that the number of the visible feet being the same with that of the tangible feet, I may from hence, without any experience of sight, reasonably conclude, that they represent or are connected with the feet ather than the head. I say, it seems the idea of two visible feet will sooner suggest to the mind the idea of two tangible feet than of one head; so that the blind man, upon first reception of the visive faculty, might know, which were the feet or two, and which the head or one.

CVIII. In order to get clear of this seeming difficulty, we need only observe, that diversity of visible objects doth not necessarily infer diversity of tangible objects corresponding to them. A picture painted with great variety of colours affects the touch in one uniform manner; it is therefore evident, that I do not by any necessary consecution, independent of experience, judge of the number of things tangible from the number of things visible. I should not therefore at first opening my eyes conclude, that because I see two I shall feel two. How, therefore, can I, before experience teaches me, know that the visible legs, because two, are connected with the tangible legs, or the visible head, because one is connected with the tangible head? The truth is, the things I see are so very different and heterogeneous from the things I feel, that the perception of the one would never have suggested the other to my thoughts, or enabled me to pass the least judgment thereon, until I had experienced their connexion.

CIX. But for a fuller illustration of this matter, it ought to be considered, that number (however some may reckon it amongst the primary qualities) is nothing fixed and settled, really existing in things themselves. It is entirely the creature of the mind, considering either an idea by itself, or any combination of ideas to which it gives one name, and so makes it pass for a unit. According as the mind variously combines its ideas, the unit varies; and as the unit so the number, which is only,

a collection of units, doth also vary. We call a window one, a chimney one, and yet a house, in which there are many windows and many chimneys, hath an equal right to be called one; and many houses go to the making of one city. In these and the like instances, it is evident the *unit* constantly relates to the particular draughts the mind makes of its ideas, to which it affixes names, and wherein it includes more or less, as best suits its own ends and purposes. Whatever therefore the mind considers as one, that is a unit. Every combination of ideas is considered as one thing by the mind, and in token thereof is marked by one name. Now, this naming and combining together of ideas is perfectly arbitrary, and done by the mind in such sort as experience shews it to be most convenient: without which our ideas had never been collected into such sundry distinct combinations as they now are.

CX. Hence it follows, that a man born blind, and afterwards, when grown up, made to see, would not, in the first act of vision, parcel out the ideas of sight, into the same distinct collections that others do, who have experienced which do regularly coexist and are proper to be bundled up together under one name. He would not, for example, make into one complex idea, and thereby esteem and unite, all those particular ideas which constitute the visible head or foot. For there can be no reason assigned why he should do so, barely upon his seeing a man stand upright before him: there crowd into his mind the ideas which compose the visible man, in company with all the other ideas of sight perceived at the same time; but all these ideas offered at once to his view, he would not distribute into sundry distinct combinations, till such time as by observing the motion of the parts of the man and other experiences, he comes to know, which are to be separated, and which to be collected together.

CXI. From what hath been premised, it is plain the

objects of sight and touch make, if I may so say, two sets of ideas, which are widely different from each other. To objects of either kind we indifferently attribute the terms high and low, right and left, and such like, denoting the position or situation of things: but then we must well observe that the position of any object is determined with respect only to objects of the same sense. We say, any object of touch is high or low according as it is more or less distant from the tangible earth: and in like manner we denominate any object of sight high or low in proportion as it is more or less distant from the visible earth: but to define the situation of visible things, with relation to the distance they bear from any tangible thing, or *vice versa*, this were absurd and perfectly unintelligible. For all visible things are equally in the mind, and take up no part of the external space: and consequently are equidistant from any tangible thing which exists without the mind.

CXII. Or rather, to speak truly, the proper objects of sight are at no distance, neither near nor far from any tangible thing. For, if we inquire narrowly into the matter, we shall find that those things only are compared together in respect of distance, which exist after the same manner, or appertain unto the same sense. For by the distance between any two points, nothing more is meant than the number of intermediate points: if the given points are visible, the distance between them is marked out by the number of the interjacent visible points: if they are tangible, the distance between them is a line consisting of tangible points; but if they are one tangible, and the other visible, the distance between them doth neither consist of points perceivable by sight nor by touch, *i. e.* it is utterly inconceivable. This, perhaps, will not find an easy admission into all men's understanding: however, I should gladly be informed whether it be not true, by any one who will be at the pains to reflect a little, and apply it home to his thoughts.

CXIII. The not observing what has been delivered in the two last sections, seems to have occasioned no small part of the difficulty that occurs in the business of erect appearances. The head, which is painted nearest the earth, seems to be farthest from it; and on the other hand, the feet, which are painted farthest from the earth, are thought nearest to it. Herein lies the difficulty, which vanishes if we express the thing more clearly and free from ambiguity, thus: how comes it that, to the eye, the visible head, which is nearest the tangible earth, seems farthest from the earth; and the visible feet, which are farthest from the tangible earth, seem nearest the earth? The question being thus proposed, who sees not the difficulty is founded on a supposition, that the eye, or visive faculty, or rather the soul by means thereof, should judge of the situation of visible objects, with reference to their distance from the tangible earth? Whereas it is evident the tangible earth is not perceived by sight: and it hath been shewn, in the two last preceding sections, that the location of visible objects is determined only by the distance they bear from one another; and that it is nonsense to talk of distance, far or near, between a visible and tangible thing.

CXIV. If we confine our thoughts to the proper objects of sight, the whole is plain and easy. The head is painted farthest from and the feet nearest to the visible earth; and so they appear to be. What is there strange or unaccountable in this? Let us suppose the pictures in the fund of the eye to be the immediate objects of the sight. The consequence is, that things should appear in the same posture they are painted in; and is it not so? The head, which is seen, seems farthest from the earth which is seen; and the feet, which are seen, seem nearest to the earth which is seen. And just so they are painted.

CXV. But, say you, the picture of the man is inverted, and yet the appearance is erect: I ask, what mean you

by the picture of the man, or, which is the same thing, the visible man's being inverted? You tell me it is inverted, because the heels are uppermost, and the head undermost? Explain me this. You say, that by the head's being undermost, you mean that it is nearest to the earth; and by the heels being uppermost, that they are farthest from the earth. I ask again, what earth you mean? You cannot mean the earth that is painted on the eye, or the visible earth: for the picture of the head is farthest from the picture of the earth, and the picture of the feet nearest to the picture of the earth; and accordingly the visible head is farthest from the visible earth, and the visible feet nearest to it. It remains, therefore, that you mean the tangible earth, and so determine the situation of visible things with respect to tangible things; contrary to what hath been demonstrated in sect. cxi. and cxii. The two distinct provinces of sight and touch should be considered apart, and as if their objects had no intercourse, no manner of relation to one another, in point of distance or position.

CXVI. Farther, what greatly contributes to make us mistake in this matter is, that when we think of the pictures in the fund of the eye, we imagine ourselves looking on the fund of another's eye, or another looking on the fund of our own eye, and beholding the pictures painted thereon. Suppose two eyes A and B: A from some distance looking on the pictures in B sees them inverted, and for that reason concludes they are inverted in B; but this is wrong. There are projected in little on the bottom of A, the images of the pictures of, suppose man, earth, &c. which are painted on B. And besides these, the eye B itself, and the objects which environ it, together with another earth, are projected in a larger size on A. Now, by the eye A, these larger images are deemed the true objects, and the lesser only pictures in miniature. And it is with respect to those greater images, that it determines the si-

tuation of the smaller images: so that, comparing the little man with the great earth, A judges him inverted, or that the feet are farthest from and the head nearest to the great earth. Whereas, if A compare the little man with the little earth, then he will appear erect, *i. e.* his head shall seem farthest from and his feet nearest to the little earth. But we must consider that B does not see two earths as A does: it sees only what is represented by the little pictures in A, and consequently shall judge the man erect: for in truth, the man in B is not inverted, for there the feet are next the earth; but it is the representation of it in A which is inverted, for there the head of the representation of the picture of the man in B is next the earth, and the feet farthest from the earth, meaning the earth which is without the representation of the pictures in B. For if you take the little images of the pictures in B, and consider them by themselves, and with respect only to one another, they are all erect and in their natural posture.

CXVII. Farther, there lies a mistake in our imagining that the pictures of external objects are painted on the bottom of the eye. It hath been shewn, there is no resemblance between the ideas of sight and things tangible. It hath likewise been demonstrated, that the proper objects of sight do not exist without the mind. Whence it clearly follows, that the pictures painted on the bottom of the eye are not the pictures of external objects. Let any one consult his own thoughts, and then say what affinity, what likeness, there is between that certain variety and disposition of colours, which constitute the visible man, or picture of a man; and that other combination of far different ideas, sensible by touch, which compose the tangible man. But if this be the case, how come they to be accounted pictures or images, since that supposes them to copy or represent some originals or other?

CXVIII. To which I answer: in the forementioned

instance, the eye A takes the little images, included within the representation of the other eye B, to be pictures or copies, whereof the archetypes are not things existing without, but the larger pictures projected on its own fund: and which by A are not thought pictures, but the originals, or true things themselves. Though if we suppose a third eye C from a due distance to behold the fund of A, then indeed the things projected thereon shall, to C, seem pictures or images, in the same sense that those projected on B do to A.

CXIX. Rightly to conceive this point, we must carefully distinguish between the ideas of sight and touch, between the visible and tangible eye; for certainly, on the tangible eye, nothing either is or seems to be painted. Again, the visible eye, as well as all other visible objects, hath been shewn to exist only in the mind, which, perceiving its own ideas, and comparing them together, calls some *pictures* in respect to others. What hath been said, being rightly comprehended, and laid together, doth, I think, afford a full and genuine explication of the erect appearance of objects; which phenomenon, I must confess, I do not see how it can be explained by any theories of vision hitherto made public.

CXX. In treating of these things, the use of language is apt to occasion some obscurity and confusion, and create in us wrong ideas: for language being accommodated to the common notions and prejudices of men, it is scarce possible to deliver the naked and precise truth, without great circumlocution, impropriety, and (to an unwary reader) seeming contradictions; I do therefore, once for all, desire, whoever shall think it worth his while to understand what I have written concerning vision, that he would not stick in this or that phrase or manner of expression, but candidly collect my meaning from the whole sum and tenor of my discourse, and, laying aside the words as much as possible,

consider the bare notions themselves, and then judge whether they are agreeable to truth and his own experience, or no.

CXXI. We have shewn the way wherein the mind by mediation of visible ideas doth perceive or apprehend the distance, magnitude, and situation, of tangible objects. I come now to inquire more particularly concerning the difference between the ideas of sight and touch, which are called by the same names, and see whether there be any idea common to both senses. From what we have at large set forth and demonstrated in the foregoing parts of this treatise, it is plain there is no one self-same numerical extension, perceived both by sight and touch; but that the particular figures and extensions perceived by sight, however they may be called by the same names and reputed the same things with those perceived by touch, are nevertheless different, and have an existence distinct and separate from them: so that the question is not now concerning the same numerical ideas, but whether there be any one and the same sort or species of ideas equally perceivable to both senses? or, in other words, whether extension, figure, and motion, perceived by sight, are not specifically distinct from extension, figure, and motion, perceived by touch?

CXXII. But before I come more particularly to discuss this matter, I find it proper to consider extension in abstract: for of this there is much talk, and I am apt to think, that when men speak of extension, as being an idea common to two senses, it is with a secret supposition, that we can single out extension from all other tangible and visible qualities, and form thereof an abstract idea, which idea they will have common both to sight and touch. We are therefore to understand by extension in abstract, an idea of extension; for instance, a line or surface, entirely stripped of all other sensible qualities and circumstances that might determine it to

any particular existence; it is neither black, nor white, nor red, nor hath it any colour at all, or any tangible quality whatsoever, and consequently it is of no finite determinate magnitude: for that which bounds or distinguishes one extension from another, is some quality or circumstance wherein they disagree.

CXXIII. Now I do not find that I can perceive, imagine, or anywise frame in my mind, such an abstract idea as is here spoken of. A line or surface, which is neither black, nor white, nor blue, nor yellow, &c. nor long, nor short, nor rough, nor smooth, nor square, nor round, &c. is perfectly incomprehensible. This I am sure of as to myself; how far the faculties of other men may reach they best can tell.

CXXIV. It is commonly said, that the object of geometry is abstract extension; but geometry contemplates figures: now, figure is the termination of magnitude, but we have shewn that extension in abstract hath no finite determinate magnitude, whence it clearly follows that it can have no figure, and consequently is not the least object of geometry. It is indeed a tenet as well of the modern as of the ancient philosophers, that all general truths are concerning universal abstract ideas; without which, we are told, there could be no science, no demonstration of any general proposition in geometry. But it were no hard matter, did I think it necessary to my present purpose, to shew what propositions and demonstrations in geometry might be universal, though they who make them never think of abstract general ideas of triangles or circles.

CXXV. After reiterated endeavours to apprehend the general idea of a triangle, I have found it altogether incomprehensible. And surely, if any one were able to introduce that idea into my mind, it must be the author of the Essay concerning Human Understanding; he, who has so far distinguished himself from the generality of writers, by the clearness and significancy of what he

says. Let us therefore see how this celebrated author describes the general or abstract idea of a triangle. "It must be (says he) neither oblique nor rectangular, neither equilateral, equicrural, nor scalenum; but all and none of these at once. In effect, it is somewhat imperfect that cannot exist; an idea, wherein some parts of several different and inconsistent ideas are put together."—Essay on Human Understanding, b. iv. c. vii. sect. ix. This is the idea which he thinks needful for the enlargement of knowledge, which is the subject of mathematical demonstration, and without which we could never come to know any general proposition concerning triangles. That author acknowledges it doth "require some pains and skill to form this general idea of a triangle."—Ibid. But had he called to mind what he says in another place, to wit, "that ideas of mixed mode, wherein any inconsistent ideas are put together, cannot so much as exist in the mind, *i. e.* be conceived;" (vide b. iii. c. x. sect. xxxiii. ibid.) I say, had this occurred to his thoughts, it is not improbable he would have owed it above all the pains and skill he was master of, to form the abovementioned idea of a triangle, which is made up of manifest staring contradictions. That a man who thought so much, and laid so great a stress, on clear and determinate ideas, should nevertheless talk at this rate, seems very surprising. But the wonder will lessen if it be considered, that the source whence this opinion flows, is the prolific womb which has brought forth innumerable errors and difficulties, in all parts of philosophy, and in all the sciences: but this matter, taken in its full extent, were a subject too vast and comprehensive to be insisted on in this place. And so much for extension in abstract.

CXXVI. Some, perhaps, may think pure space, *vacuum*, or trine dimension, to be equally the object of sight and touch: but though we have a very great propension to think the ideas of outness and space to be

the immediate object of sight; yet if I mistake not, in the foregoing parts of this Essay, that hath been clearly demonstrated to be a mere delusion, arising from the quick and sudden suggestion of fancy, which so closely connects the idea of distance with those of sight, that we are apt to think it is itself a proper and immediate object of that sense, till reason corrects the mistake.

CXXVII. It having been shewn that there are no abstract ideas of figure, and that it is impossible for us, by any precision of thought, to frame an idea of extension separate from all other visible and tangible qualities, which shall be common both to sight and touch; the question now remaining is, whether the particular extensions, figures, and motions, perceived by sight, be of the same kind with the particular extensions, figures, and motions, perceived by touch? In answer to which I shall venture to lay down the following proposition: *The extension, figures, and motions, perceived by sight, are specifically distinct from the ideas of touch, called by the same names; nor is there any such thing as one idea, or kind of idea, common to both senses.* This proposition may, without much difficulty, be collected from what hath been said in several places of this Essay. But because it seems so remote from and contrary to the received notions and settled opinion of mankind. I shall attempt to demonstrate it more particularly, and at large, by the following arguments.

CXXVIII. When upon perception of an idea I range it under this or that sort, it is because it is perceived after the same manner, or because it has a likeness or conformity with or affects me in the same way as the ideas of the sort I rank it under. In short, it must not be entirely new, but have something in it old, and already perceived by me: it must, I say, have so much, at least, in common with the ideas I have before known and named, as to make me give it the same name

with them. But it has been, if I mistake not, clearly made out, that a man born blind would not, at first reception of his sight, think the things he saw were of the same nature with the objects of touch, or had any thing in common with them; but that they were a new set of ideas, perceived in a new manner, and entirely different from all he had ever perceived before: so that he would not call them by the same name, nor repute them to be of the same sort, with any thing he had hitherto known.

CXXIX. *Secondly*, Light and colours are allowed by all to constitute a sort or species entirely different from the ideas of touch: nor will any man, I presume, say, they can make themselves perceived by that sense: but there is no other immediate objects of sight beside light and colours. It is therefore a direct consequence, that there is no idea common to both senses.

CXXX. It is a prevailing opinion, even amongst those who have thought and writ most accurately concerning our ideas, and the ways whereby they enter into the understanding, that something more is perceived by sight than barely light and colours with their variations. Mr. Locke termeth sight, "the most comprehensive of all our senses, conveying to our minds the ideas of light and colours, which are peculiar only to that sense; and also the far different ideas of space, figure, and motion." —Essay on Human Understanding, b. ii. c. ix. sect. ix. Space or distance, we have shewn, is no otherwise the object of sight than of hearing. (Vide sect. xlvi.) And as for figure and extension, I leave it to any one that shall calmly attend to his own clear and distinct ideas, to decide whether he has any idea intromitted immediately and properly by sight save only light and colours: or whether it be possible for him, to frame in his mind a distinct abstract idea of visible extension, or figure, exclusive of all colour; and, on the other hand, whether he can conceive colour, without visible extension? For my own part, I must confess, I am not able to attain so

great a nicety of abstraction; in a strict sense, I see nothing but light and colours, with their several shades and variations. He who beside these doth also perceive by sight ideas far different and distinct from them, hath that faculty in a degree more perfect and comprehensive that I can pretend to. It must be owned, that by the mediation of light and colours, other far different ideas are suggested to my mind: but so they are by hearing, which, beside sounds which are peculiar to that sense, doth by their mediation suggest not only space, figure, and motion, but also all other ideas whatsoever that can be signified by words.

CXXXI. *Thirdly*, It is, I think, an axiom universally received, that quantities of the same kind may be added together, and make one entire sum. Mathematicians add lines together; but they do not add a line to a solid, or conceive it as making one sum with a surface: these three kinds of quantity being thought incapable of any such mutual addition, and consequently of being compared together, in the several ways of proportion, are by them esteemed entirely disparate and heterogeneous. Now let any one try in his thoughts to add a visible line or surface to a tangible line or surface, so as to conceive them making one continued sum or whole. He that can do this may think them homogeneous; but he that cannot must, by the foregoing axiom, think them heterogeneous: a blue and a red line I can conceive added together into one sum, and making one continued line; but to make in my thoughts one continued line of a visible and tangible line added together, is, I find, a task far more difficult, and even insurmountable; and I leave it to the reflection and experience of every particular person to determine for himself.

CXXXII. A farther confirmation of our tenet may be drawn from the solution of Mr. Molyneux's problem, published by Mr. Locke in his Essay: which I shall set down as it there lies, together with Mr. Locke's opinion of it. " ' Suppose a man born blind, and now adult, and

taught by his touch to distinguish between a cube and a sphere of the same metal, and nighly of the same bigness, so as to tell, when he felt one and t'other, which is the cube, and which the sphere. Suppose then the cube and sphere placed on a table, and the blind man to see: Query, Whether by his sight, before he touched them, he could now distinguish, and tell, which is the globe, which the cube.' To which the acute and judicious proposer answers: 'Not. For though he has obtained the experience of, how a globe, how a cube affects his touch; yet he has not yet attained the experience, that what affects his touch so or so, must affect his sight so or so: or that a protuberant angle in the cube, that pressed his hand unequally, shall appear to his eye as it doth in the cube.' I agree with this thinking gentleman, whom I am proud to call my friend, in his answer to this problem; and am of opinion that the blind man, at first sight, would not be able with certainty to say, which was the globe, which the cube, whilst he only saw them."—Essay on Human Understanding, b. ii. c. ix. sect. viii.

CXXXIII. Now, if a square surface perceived by touch be of the same sort with a square surface perceived by sight, it is certain the blind man here mentioned might know a square surface as soon as he saw it: it is no more but introduced into his mind, by a new inlet, an idea he has been already well acquainted with. Since therefore he is supposed to have known by his touch, that a cube is a body terminated by square surfaces; and that a sphere is not terminated by square surfaces: upon the supposition that a visible and tangible square differ only *in numero*, it follows, that he might know, by the unerring mark of the square surfaces, which was the cube, and which not, while he only saw them. We must therefore allow, either that visible extension and figures are specifically distinct from tangible extension and figures, or else, that the solution of this problem, given by those two thoughtful and ingenious men, is wrong.

CXXXIV. Much more might be laid together in proof of the proposition I have advanced: but what has been said is, if I mistake not, sufficient to convince any one that shall yield a reasonable attention: and as for those that will not be at the pains of a little thought, no multiplication of words will ever suffice to make them understand the truth, or rightly conceive my meaning.

CXXXV. I cannot let go the abovementioned problem without some reflection on it. It hath been made evident, that a man blind from his birth would not, at first sight, denominate any thing he saw, by the names he had been used to appropriate to ideas of touch. (Vide sect. cvi.) Cube, sphere, table, are words he has known applied to things perceivable by touch, but to things perfectly intangible he never knew them applied. Those words, in their wonted application, always marked out to his mind bodies, or solid things which were perceived by the resistance they gave: but there is no solidity, no resistance or protrusion, perceived by sight. In short, the ideas of sight are all new perceptions, to which there be no names annexed in his mind; he cannot therefore understand what is said to him concerning them: and to ask of the two bodies he saw placed on the table, which was the sphere, which the cube, were, to him, a question downright bantering and unintelligible; nothing he sees being able to suggest to his thoughts the idea of body, distance, or, in general, of any thing he had already known.

CXXXVI. It is a mistake to think the same thing affects both sight and touch. If the same angle or square, which is the object of touch, be also the object of vision, what should hinder the blind man, at first sight, from knowing it? For though the manner wherein it affects the sight be different from that wherein it affected his touch, yet there being, beside this manner or circumstance, which is new and unknown, the angle or figure, which is old and known, he cannot choose but discern it.

CXXXVII. Visible figure and extension having been demonstrated to be of a nature entirely different and heterogeneous from tangible figure and extension, it remains that we inquire concerning motion. Now that visible motion is not of the same sort with tangible motion, seems to need no farther proof, it being an evident corollary from what we have shewn concerning the difference there is between visible and tangible extension: but for a more full and express proof hereof, we need only observe, that one who had not yet experienced vision, would not at first sight know motion. Whence it clearly follows, that motion perceivable by sight is of a sort distinct from motion perceivable by touch. The antecedent I prove thus: by touch he could not perceive any motion but what was up or down, to the right or left, nearer or farther from him; besides these, and their several varieties or complications, it is impossible he should have any idea of motion. He would not therefore think any thing to be motion, or give the name motion to any idea, which he could not range under some or other of those particular kinds thereof. But from sect. xcv. it is plain that by the mere act of vision, he could not know motion upwards or downwards, to the right or left, or in any other possible direction. From which I conclude, he would not know motion at all at first sight. As for the idea of motion in abstract, I shall not waste paper about it, but leave it to my reader, to make the best he can of it. To me it is perfectly unintelligible.

CXXXVIII. The consideration of motion may furnish a new field for inquiry: but since the manner wherein the mind apprehends by sight the motion of tangible objects, with the various degrees thereof, may be easily collected, from what hath been said concerning the manner wherein that sense doth suggest the various distances, magnitudes, and situations, I shall not enlarge any farther on this subject, but proceed to in-

quire what may be alleged, with greatest appearance of reason, against the proposition we have shewn to be true: for where there is so much prejudice to be encountered, a bare and naked demonstration of the truth will scarce suffice. We must also satisfy the scruples that men may raise in favour of their preconceived notions, shew whence the mistake arises, how it came to spread, and carefully disclose and root out those false persuasions, that an early prejudice might have implanted in the mind.

CXXXIX. *First*, therefore, it will be demanded, how visible extension and figures come to be called by the same name with tangible extension and figures, if they are not of the same kind with them? It must be something more than humour or accident, that could occasion a custom so constant and universal as this, which has obtained in all ages and nations of the world, and amongst all ranks of men, the learned as well as the illiterate.

CXL. To which I answer, we can no more argue a visible and tangible square to be of the same species, from their being called by the same name, than we can, that a tangible square and the monosyllable consisting of six letters, whereby it is marked, are of the same species, because they are both called by the same name. It is customary to call written words, and the things they signify, by the same name: for words not being regarded in their own nature, or otherwise than as they are marks of things, it had been superfluous, and beside the design of language, to have given them names distinct from those of the things marked by them. The same reason holds here also. Visible figures are the marks of tangible figures, and from sect. lix. it is plain, that in themselves they are little regarded, or upon any other score than for their connexion with tangible figures, which by nature they are ordained to signify. And because this language of nature does not vary in different

ages or nations, hence it is, that in all times and places visible figures are called by the same names as the respective tangible figures suggested by them, and not because they are alike, or of the same sort with them.

CXLI. But, say you, surely a tangible square is liker to a visible square than to a visible circle: it has four angles, and as many sides; so also has the visible square, but the visible circle has no such thing, being bounded by one uniform curve, without right lines or angles, which makes it unfit to represent the tangible square, but very fit to represent the tangible circle. Whence it clearly follows, that visible figures are patrons of, or of the same species with, the respective tangible figures represented by them; that they are like unto them, and of their own nature fitted to represent them, as being of the same sort; and that they are in no respect arbitrary signs, as words.

CXLII. I answer, it must be acknowledged, the visible square is fitter than the visible circle to represent the tangible square, but then it is not because it is liker, or more of a species with it; but because the visible square contains in it several distinct parts, whereby to mark the several distinct corresponding parts of a tangible square, whereas the visible circle doth not. The square perceived by touch hath four distinct equal sides, so also hath it four distinct equal angles. It is therefore necessary, that the visible figures which shall be most proper to mark it, contain four distinct equal parts corresponding to the four sides of the tangible square; as likewise four other distinct and equal parts, whereby to denote the four equal angles of the tangible square. And accordingly we see the visible figures contain in them distinct visible parts answering to the distinct tangible parts of the figures signified or suggested by them.

CXLIII. But it will not hence follow, that any visible figure is like unto or of the same species with its corresponding tangible figure, unless it be also shewn,

that not only the number, but also the kind of the parts be the same in both. To illustrate this, I observe that visible figures represent tangible figures, much after the same manner that written words do sounds. Now, in this respect, words are not arbitrary, it not being indifferent what written word stands for any sound; but it is requisite, that each word contain in it so many distinct characters, as there are variations in the sound it stands for. Thus the single letter *a* is proper to mark one simple uniform sound; and the word *adultery* is accommodated to represent the sound annexed to it, in the formation whereof, there being eight different collisions, or modifications of the air by the organs of speech, each of which produces a difference of sound, it was fit the word representing it should consist of as many distinct characters, thereby to mark each particular difference, or part of the whole sound: and yet nobody, I presume, will say, the single letter *a*, or the word *adultery*, is alike unto, or of the same species with the respective sounds by them represented. It is indeed arbitrary, that in general, letters of any language represent sounds at all; but when that is once agreed, it is not arbitrary what combination of letters shall represent this or that particular sound. I leave this with the reader to pursue, and apply it in his own thoughts.

CXLIV. It must be confessed that we are not so apt to confound other signs with the things signified, or to think them of the same species, as we are visible and tangible ideas. But a little consideration will shew us how this may be, without our supposing them of a like nature. These signs are constant and universal, their connexion with tangible ideas has been learnt at our first entrance into the world; and ever since, almost every moment of our lives, it has been occurring to our thoughts, and fastening and striking deeper on our minds. When we observe that signs are variable, and of human institution; when we remember, there was a

time they were not connected in our minds with those things they now so readily suggest; but that their signification was learned by the slow steps of experience: this preserves us from confounding them. But when we find the same signs suggest the same things all over the world; when we know they are not of human institution, and cannot remember that we ever learned their signification, but think that at first sight they would have suggested to us the same things they do now: all this persuades us they are of the same species as the things respectively represented by them, and that it is by a natural resemblance they suggest them to our minds.

CXLV. Add to this, that whenever we make a nice survey of any object, successively directing the optic axis to each point thereof; there are certain lines and figures described by the motion of the head or eye, which, being in truth perceived by feeling, do nevertheless so mix themselves, as it were, with the ideas of sight, that we can scarce think but they appertain to that sense. Again, the ideas of sight enter into the mind, several at once more distinct and unmingled, than is usual in the other senses beside the touch. Sounds, for example, perceived at the same instant, are apt to coalesce, if I may so say, into one sound: but we can perceive, at the same time, great variety of visible objects, very separate and distinct from each other. Now tangible extension being made up of several distinct coexistent parts, we may hence gather another reason, that may dispose us to imagine a likeness or analogy between the immediate objects of sight and touch. But nothing, certainly, doth more contribute to blend and confound them together, than the strict and close connexion they have with each other. We cannot open our eyes but the ideas of distance, bodies, and tangible figures, are suggested by them. So swift, and sudden, and unperceived, is the transition from visible to tangible

ideas, that we can scarce forbear thinking them equally the immediate object of vision.

CXLVI. The prejudice, which is grounded on these, and whatever other causes may be assigned thereof, sticks so fast, that it is impossible, without obstinate striving, and labour of the mind, to get entirely clear of it. But then the reluctancy we find, in rejecting any opinion, can be no argument of its truth, to whoever considers what has been already shewn, with regard to the prejudices we entertain concerning the distance, magnitude, and situation, of objects; prejudices so familiar to our minds, so confirmed and inveterate, as they will hardly give way to the clearest demonstration.

CXLVII. Upon the whole, I think, we may fairly conclude, that the proper objects of vision constitute a universal language of the Author of nature, whereby we are instructed how to regulate our actions, in order to attain those things that are necessary to the preservation and well-being of our bodies, as also to avoid whatever may be hurtful and destructive of them. It is by their information that we are principally guided in all transactions and concerns of life. And the manner wherein they signify and mark unto us the objects which are at a distance, is the same with that of languages and signs of human appointment, which do not suggest the things signified, by any likeness or identity of nature, but only by an habitual connexion, that experience has made us to observe between them.

CXLVIII. Suppose one who had always continued blind be told by his guide, that after he has advanced so many steps, he shall come to the brink of a precipice, or be stopped by a wall; must not this, to him, seem very admirable and surprising? He cannot conceive how it is possible for mortals to frame such predictions as these, which, to him, would seem as strange and unaccountable, as prophecy doth to others. Even they who are blessed with the visive faculty, may (though

familiarity make it less observed) find therein sufficient cause of admiration. The wonderful art and contrivance wherewith it is adjusted to those ends and purposes for which it was apparently designed, the vast extent, number, and variety, of objects that are at once, with so much ease, and quickness, and pleasure, suggested by it: all these afford subject for much and pleasing speculation, and may, if any thing, give us some glimmering analogous prenotion of things, which are placed beyond the certain discovery and comprehension of our present state.

CXLIX. I do not design to trouble myself with drawing corollaries from the doctrines I have hitherto laid down. If it bears the test, others may, so far as they shall think convenient, employ their thoughts in extending it farther, and applying it to whatever purposes it may be subservient to: only, I cannot forbear making some inquiry concerning the object of geometry, which the subject we have been upon doth naturally lead one to. We have shewn there is no such idea as that of extension in abstract, and that there are two kinds of sensible extension and figures, which are entirely distinct and heterogeneous from each other. Now, it is natural to inquire which of these is the object of geometry.

CL. Some things there are, which, at first sight, incline one to think geometry conversant about visible extension. The constant use of the eyes, both in the practical and speculative parts of that science, doth very much induce us thereto. It would, without doubt, seem odd to a mathematician to go about to convince him, the diagrams he saw upon paper were not the figures, or even the likeness of the figures, which make the subject of the demonstration. The contrary being held an unquestionable truth, not only by mathematicians, but also by those who apply themselves more particularly to the study of logic; I mean, who consider

the nature of science, certainty, and demonstration; it being by them assigned as one reason of the extraordinary clearness and evidence of geometry, that in this science the reasonings are free from those inconveniences which attend the use of arbitrary signs, the very ideas themselves being copied out, and exposed to view upon paper. But, by the by, how well this agrees with what they likewise assert of abstract ideas, being the object of geometrical demonstration, I leave to be considered.

CLI. To come to a resolution in this point, we need only observe what hath been said in sect. lix. lx. lxi. where it is shewn that visible extensions in themselves are little regarded, and have no settled determinate greatness, and that men measure altogether by the application of tangible extension to tangible extension. All which makes it evident, that visible extension and figures are not the object of geometry.

CLII. It is therefore plain, that visible figures are of the same use in geometry that words are: and the one may as well be accounted the object of that science as the other; neither of them being any otherwise concerned therein, than as they represent or suggest to the mind the particular tangible figures connected with them. There is, indeed, this difference between the signification of tangible figures by visible figures, and of ideas by words; that whereas the latter is variable and uncertain, depending altogether on the arbitrary appointment of men, the former is fixed, and immutably the same in all times and places. A visible square, for instance, suggests to the mind the same tangible figure in Europe that it doth in America. Hence it is, that the voice of the Author of nature, which speaks to our eyes, is not liable to that misinterpretation and ambiguity, that languages of human contrivance are unavoidably subject to.

CLIII. Though what has been said may suffice to

shew what ought to be determined with relation to the object of geometry, I shall nevertheless, for the fuller illustration thereof, consider the case of an intelligence or unbodied spirit, which is supposed to see perfectly well, *i. e.* to have a clear perception of the proper and immediate objects of sight, but to have no sense of touch. Whether there be any such being in nature or no, is beside my purpose to inquire. It sufficeth, that the supposition contains no contradiction in it. Let us now examine, what proficiency such a one may be able to make in geometry. Which speculation will lead us more clearly to see, whether the ideas of sight can possibly be the object of that science.

CLIV. First, then, it is certain, the aforesaid intelligence could have no idea of a solid, or quantity of three dimensions, which followeth from its not having any idea of distance. We, indeed, are prone to think, that we have by sight the ideas of space and solids, which ariseth from our imagining that we do, strictly speaking, see distance, and some parts of an object at a greater distance than others, which hath been demonstrated to be the effect of the experience we have had; what ideas of touch are connected with such and such ideas attending vision; but the intelligence here spoken of is supposed to have no experience of touch. He would not, therefore, judge as we do, nor have any idea of distance, outness, or profundity, nor consequently of space or body, either immediately or by suggestion. Whence it is plain, he can have no notion of those parts of geometry which relate to the mensuration of solids, and their convex or concave surfaces, and contemplate the properties of lines generated by the section of a solid. The conceiving of any part whereof is beyond the reach of his faculties.

CLV. Farther, he cannot comprehend the manner wherein geometers describe a right line or circle; the rule and compass with their use, being things of which

it is impossible he should have any notion: nor is it an easier matter for him to conceive the placing of one plain or angle on another, in order to prove their equality: since that supposeth some idea of distance, or external space. All which makes it evident, our pure intelligence could never attain to know so much as the first elements of plain geometry. And, perhaps, upon a nice inquiry, it will be found, he cannot even have an idea of plain figures any more than he can of solids; since some idea of distance is necessary to form the idea of a geometrical plain, as will appear to whoever shall reflect a little on it.

CLVI. All that is properly perceived by the visive faculty, amounts to no more than colours with their variations, and different proportions of light and shade: but the perpetual mutability and fleetingness of those immediate objects of sight, render them incapable of being managed after the manner of geometrical figures; nor is it in any degree useful that they should. It is true, there are divers of them perceived at once; and more of some, and less of others: but accurately to compute their magnitude, and assign precise determinate proportions, between things so variable and inconstant, if we suppose it possible to be done, must yet be a very trifling and insignificant labour.

CLVII. I must confess, it seems to be the opinion of some ingenious men, that flat or plain figures are immediate objects of sight, though they acknowledge solids are not. And this opinion of theirs is grounded on what is observed in painting, wherein (say they) the ideas immediately imprinted on the mind, are only of plains variously coloured, which, by a sudden act of the judgment, are changed into solids: but, with a little attention, we shall find the plains here mentioned, as the immediate objects of sight, are not visible but tangible plains. For when we say that pictures are plains, we mean thereby, that they appear to the touch smooth

and uniform. But then this smoothness and uniformity, or, in other words, this plainness of the picture, is not perceived immediately by vision: for it appeareth to the eye various and multiform.

CLVIII. From all which we may conclude, that plains are no more the immediate object of sight than solids. What we strictly see are not solids, nor yet plains variously coloured; they are only diversity of colours. And some of these suggest to the mind solids, and others plain figures; just as they have been experienced to be connected with the one or the other: so that we see plains in the same way that we see solids; both being equally suggested by the immediate objects of sight, which accordingly are, themselves, denominated plains and solids: but though they are called by the same names with the things marked by them, they are, nevertheless, of a nature entirely different, as hath been demonstrated.

CLIX. What hath been said is, if I mistake not, sufficient to decide the question we propose to examine concerning the ability of a pure spirit, such as we have described, to know *geometry*. It is, indeed, no easy matter for us to enter precisely into the thoughts of such an intelligence; because we cannot, without great pains, cleverly separate and disintangle in our thoughts the proper objects of sight from those of touch, which are connected with them. This, indeed, in a complete degree, seems scarce possible to be performed: which will not seem strange to us, if we consider how hard it is, for any one to hear the words of his native language pronounced in his ears without understanding them. Though he endeavour to disunite the meaning from the sound, it will, nevertheless, intrude into his thoughts, and he shall find it extremely difficult, if not impossible, to put himself exactly in the posture of a foreigner, that never learned the language, so as to be affected barely

with the sounds themselves, and not perceive the signification annexed to them.

CLX. By this time, I suppose, it is clear that neither abstract nor visible extension makes the object of geometry; the not discerning of which may, perhaps, have created some difficulty and useless labour in mathematics. Sure I am, that somewhat relating thereto has occurred to my thoughts, which, though after the most anxious and repeated examination I am forced to think it true, doth, nevertheless, seem so far out of the common road of *geometry*, that I know not, whether it may not be thought presumption, if I should make it public in an age wherein that science hath received such mighty improvements by new methods; great part whereof, as well as of the ancient discoveries, may, perhaps, lose their reputation, and much of that ardour with which men study the *abstruse and fine geometry* be abated, if what to me, and those few to whom I have imparted it, seems evidently true, should really prove to be so.

ALCIPHRON;

OR, THE

MINUTE PHILOSOPHER:

IN SEVEN DIALOGUES.

CONTAINING

AN APOLOGY FOR THE CHRISTIAN RELIGION, AGAINST THOSE WHO ARE CALLED FREE-THINKERS.

ADVERTISEMENT.

The Author's design being to consider the free-thinker in the various lights of atheist, libertine, enthusiast, scorner, critic, metaphysician, fatalist, and sceptic, it must not therefore be imagined, that every one of these characters agrees with every individual free-thinker; no more being implied, than that each part agrees with some or other of the sect. There may, possibly, be a reader who shall think the character of atheist agrees with none: but though it hath been often said, there is no such thing as a speculative atheist; yet we must allow, there are several atheists who pretend to speculation. This the Author knows to be true; and is well assured, that one of the most noted writers against Christianity in our times, declared, he had found out a demonstration against the being of a God. And he doubts not, whoever will be at the pains to inform himself, by a general conversation, as well as books, of the principles and tenets of our modern free-thinkers, will see too much cause to be persuaded that nothing in the ensuing characters is beyond the life.

THE

MINUTE PHILOSOPHER.

THE FIRST DIALOGUE.

I. Introduction. II. Aim and endeavours of free-thinkers. III. Opposed by the clergy. IV. Liberty of free-thinking. V. Farther account of the views of free-thinkers. VI. The progress of a free-thinker towards atheism. VII. Joint imposture of the priest and magistrate. VIII. The free-thinker's method in making converts and discoveries. IX. The atheist alone free. His sense of natural good and evil. X. Modern free-thinkers more properly named minute philosophers. XI. Minute philosophers, what sort of men, and how educated. XII. Their numbers, progress, and tenets. XIII. Compared with other philosophers. XIV. What things and notions to be esteemed natural. XV. Truth the same, notwithstanding diversity of opinion. XVI. Rule and measure of moral truths.

I. I FLATTERED myself, Theages, that before this time I might have been able to have sent you an agreeable account of the success of the affair which brought me into this remote corner of the country. But instead of this, I should now give you the detail of its miscarriage, if I did not rather choose to entertain you with some amusing incidents, which have helped to make me easy under a circumstance I could neither obviate nor foresee. Events are not in our power; but it always is, to make a good use even of the very worst. And I must needs own, the course and event of this affair gave opportunity for reflections that make me some amends for a great loss of time, pains, and expense. A life of action, which takes its issue from the counsels, passions, and views, of other men, if it doth not draw a man to imitate, will at

least teach him to observe. And a mind at liberty to reflect on its own observations, if it produce nothing useful to the world, seldom fails of entertainment to itself. For several months past I have enjoyed such liberty and leisure in this distant retreat, far beyond the verge of that great whirlpool of business, faction, and pleasure, which is called the *world*. And a retreat in itself agreeable, after a long scene of trouble and disquiet, was made much more so by the conversation and good qualities of my host, Euphranor, who unites in his own person the philosopher and the farmer, two characters not so inconsistent in nature as by custom they seem to be. Euphranor, from the time he left the university, hath lived in this small town, where he is possessed of a convenient house with a hundred acres of land adjoining to it; which, being improved by his own labour, yield him a plentiful subsistence. He hath a good collection, chiefly of old books, left him by a clergyman his uncle, under whose care he was brought up. And the business of his farm doth not hinder him from making good use of it. He hath read much, and thought more; his health and strength of body enabling him the better to bear fatigue of mind. He is of opinion that he could not carry on his studies with more advantage in the closet than the field, where his mind is seldom idle while he prunes the trees, follows the plough, or looks after his flocks. In the house of this honest friend I became acquainted with Crito, a neighbouring gentleman of distinguished merit and estate, who lives in great friendship with Euphranor. Last summer, Crito, whose parish-church is in our town, dining on a Sunday at Euphranor's, I happened to inquire after his guests, whom we had seen at church with him the Sunday before. They are both well, said Crito, but having once occasionally conformed, to see what sort of assembly our parish could afford, they had no farther curiosity to gratify at church, and so chose to

stay at home. How, said Euphranor, are they then dissenters? No, replied Crito, they are free-thinkers. Euphranor, who had never met with any of these species or sect of men, and but little of their writings, shewed a great desire to know their principles or system. That is more, said Crito, than I will undertake to tell you. Their writers are of different opinions. Some go farther, and explain themselves more freely, than others. But the current general notions of the sect are best learned from conversation with those who profess themselves of it. Your curiosity may now be satisfied, if you and Dion would spend a week at my house with these gentlemen, who seem very ready to declare and propagate their opinions. Alciphron is above forty, and no stranger either to men or books. I knew him first at the Temple, which upon an estate's falling to him he quitted, to travel through the polite parts of Europe. Since his return he hath lived in the amusements of the town, which, being grown stale and tasteless to his palate, have flung him into a sort of splenetic indolence. The young gentleman, Lysicles, is a near kinsman of mine, one of lively parts, and a general insight into letters, who, after having passed the forms of education, and seen a little of the world, fell into an intimacy with men of pleasure, and free-thinkers, I am afraid much to the damage of his constitution and his fortune. But what I most regret, is the corruption of his mind by a set of pernicious principles, which, having been observed to survive the passions of youth, forestal even the remote hopes of amendment. They are both men of fashion, and would be agreeable enough, if they did not fancy themselves free-thinkers. But this, to speak the truth, has given them a certain air and manner, which a little too visibly declare they think themselves wiser than the rest of the world. I should therefore be not at all displeased if my guests met with their match, where they least expected it, in a country farmer. I

shall not, replied Euphranor, pretend to any more than barely to inform myself of their principles and opinions. For this end I propose to-morrow to set a week's task to my labourers, and accept your invitation, if Dion thinks good. To which I gave consent. Mean while, said Crito, I shall prepare my guests, and let them know that an honest neighbour hath a mind to discourse with them on the subject of their free-thinking. And, if I am not much mistaken, they will please themselves with the prospect of leaving a convert behind them, even in a country village. Next morning Euphranor rose early, and spent the forenoon in ordering his affairs. After dinner we took our walk to Crito's, which lay through half a dozen pleasant fields planted round with plane-trees, that are very common in this part of the country. We walked under the delicious shade of these trees for about an hour before we came to Crito's house, which stands in the middle of a small park, beautified with two fine groves of oak and walnut, and a winding stream of sweet and clear water. We met a servant at the door with a small basket of fruit, which he was carrying into the grove, where he said his master was with the two strangers. We found them all three sitting under a shade. And after the usual forms at first meeting, Euphranor and I sat down by them. Our conversation began upon the beauty of this rural scene, the fine season of the year, and some late improvements which had been made in the adjacent country by new methods of agriculture. Whence Alciphron took occasion to observe, that the most valuable improvements came latest. I should have small temptation, said he, to live where men have neither polished manners, nor improved minds, though the face of the country were ever so well improved. But I have long observed, that there is a gradual progress in human affairs. The first care of mankind is to supply the cravings of nature; in the next place they study the convenien-

ces and comforts of life. But the subduing prejudices, and acquiring true knowledge, that Herculean labour, is the last, being what demands the most perfect abilities, and to which all other advantages are preparative. Right, said Euphranor, Alciphron hath touched our true defect. It was always my opinion, that as soon as we had provided subsistence for the body, our next care should be to improve the mind. But the desire of wealth steps between and engrosseth men's thoughts.

II. *Alciphron.* Thought is that which we are told distinguisheth man from beast; and freedom of thought makes as great a difference between man and man. It is to the noble assertors of this privilege and perfection of human kind, the free-thinkers I mean, who have sprung up and multiplied of late years, that we are indebted for all those important discoveries, that ocean of light, which hath broke in and made its way, in spite of slavery and superstition. Euphranor, who is a sincere enemy to both, testified a great esteem for those worthies who had preserved their country from being ruined by them, having spread so much light and knowledge over the land. He added, that he liked the name and character of a free-thinker: but in his sense of the word, every honest inquirer after truth in any age or country was entitled to it. He therefore desired to know what this sect was that Alciphron had spoken of as newly sprung up; what were their tenets; what were their discoveries; and wherein they employed themselves, for the benefit of mankind? Of all which, he should think himself obliged, if Alciphron would inform him. That I shall very easily, replied Alciphron, for I profess myself one of the number, and my most intimate friends are some of the most considerable among them. And perceiving that Euphranor heard him with respect, he proceeded very fluently. You must know, said, he, that the mind of man may be fitly compared to a piece of land. What stubbing, ploughing, digging, and harrowing, are to the one, that think-

ing, reflecting, examining, are to the other. Each hath its proper culture; and as land that is suffered to lie waste and wild for a long tract of time will be overspread with brush-wood, brambles, thorns, and such vegetables which have neither use nor beauty; even so there will not fail to sprout up in a neglected uncultivated mind a great number of prejudices and absurd opinions, which owe their origin partly to the soil itself, the passions and imperfections of the mind of man, and partly to those seeds which chance to be scattered in it by every wind of doctrine, which the cunning of statesmen, the singularity of pedants, the superstition of fools, or the imposture of priests, shall raise. Represent to yourself the mind of man, or human nature in general, that for so many ages had lain obnoxious to the frauds of designing and the follies of weak men; how it must be overrun with prejudices and errors, what firm and deep roots they must have taken, and consequently how difficult a task it must be to extirpate them! And yet this work, no less difficult than glorious, is the employment of the modern free-thinkers. Alciphron having said this made a pause, and looked round on the company. Truly, said I, a very laudable undertaking! We think, said Euphranor, that it is praiseworthy to clear and subdue the earth, to tame brute animals, to fashion the outsides of men, provide sustenance for their bodies, and cure their maladies. But what is all this in comparison of that most excellent and useful undertaking, to free mankind from their errors, and to improve and adorn their minds; for things of less merit towards the world, altars have been raised, and temples built, in ancient times. Too many in our days, replied Alciphron, are such fools as not to know their best benefactors from their worst enemies. They have a blind respect for those who enslave them, and look upon their deliverers as a dangerous sort of men that would undermine received principles and opinions. *Euphranor.* It were a great pity such worthy

ingenious men should meet with any discouragement. For my part I should think a man, who spent his time in such a painful impartial search after truth, a better friend to mankind than the greatest statesman or hero, the advantage of whose labours is confined to a little part of the world, and a short space of time, whereas a ray of truth may enlighten the whole world and extend to future ages. *Alc.* It will be some time I fear before the common herd think as you do. But the better sort, the men of parts and polite education, pay a due regard to the patrons of light and truth.

III. *Euph.* The clergy, no doubt, are on all occasions ready to forward and applaud your worthy endeavours. Upon hearing this Lysicles could hardly refrain from laughing. And Alciphron with an air of pity told Euphranor, that he perceived he was unacquainted with the real character of those men. For, saith he, you must know that of all men living they are our greatest enemies. If it were possible, they would extinguish the very light of nature, turn the world into a dungeon, and keep mankind for ever in chains and darkness. *Euph.* I never imagined any thing like this of our protestant clergy, particularly those of the established church, whom, if I may be allowed to judge by what I have seen of them and their writings, I should have thought lovers of learning and useful knowledge. *Alc.* Take my word for it, priests of all religions are the same: wherever there are priests, there will be priestcraft: and wherever there is priestcraft, there will be a persecuting spirit, which they never fail to exert to the utmost of their power against all those who have the courage to think for themselves, and will not submit to be hoodwinked and manacled by their reverend leaders. Those great masters of pedantry and jargon have coined several systems, which are all equally true, and of equal importance to the world. The contending sects are each alike fond of their own, and alike prone to discharge their fury

upon all who dissent from them. Cruelty and ambition being the darling vices of priests and churchmen all the world over, they endeavour in all countries to get an ascendent over the rest of mankind, and the magistrate, having a joint interest with the priest in subduing, amusing, and scaring the people, too often lends a hand to the hierarchy, who never think their authority and possessions secure, so long as those who differ from them in opinion are allowed to partake even in the common rights belonging to their birth or species. To represent the matter in a true light, figure to yourselves a monster or spectre made up of superstition and enthusiasm, the joint issue of statecraft and priestcraft, rattling chains in one hand, and with the other brandishing a flaming sword over the land, and menacing destruction to all who shall dare to follow the dictates of reason and common sense. Do but consider this, and then say if there was not danger as well as difficulty in our undertaking. Yet such is the generous ardour that truth inspires, our free-thinkers are neither overcome by the one nor daunted by the other. In spite of both we have already made so many proselytes among the better sort, and their numbers increase so fast, that we hope we shall be able to carry all before us, beat down the bulwarks of all tyranny, secular or ecclesiastical, break the fetters and chains of our countrymen, and restore the original inherent rights, liberties, and prerogatives, of mankind. Euphranor heard this discourse with his mouth open, and his eyes fixed upon Alciphron, who, having uttered it with no small emotion, stopped to draw breath and recover himself; but finding that nobody made answer he resumed the thread of his discourse, and turning to Euphranor spoke in a lower note what follows. The more innocent and honest a man is, the more liable is he to be imposed on by the specious pretences of other men. You have probably met with certain writings of our divines that treat of grace, virtue,

goodness, and such matters fit to amuse and deceive a simple honest mind. But believe me when I tell you, they are all at bottom (however they may gild their designs) united by one common principle in the same interest. I will not deny there may be here and there a poor half-witted man that means no mischief; but this I will be bold to say, that all the men of sense among them are true at bottom to these three pursuits of ambition, avarice, and revenge.

IV. While Alciphron was speaking, a servant came to tell him and Lysicles, that some men who were going to London waited to receive their orders. Whereupon they both rose up, and went towards the house. They were no sooner gone but Euphranor, addressing himself to Crito, said, he believed that poor gentleman had been a great sufferer for his free-thinking, for that he seemed to express himself with the passion and resentment natural to men who have received very bad usage. I believe no such thing, answered Crito, but have often observed those of his sect run into two faults of conversation, declaiming and bantering, just as the tragic or the comic humour prevails. Sometimes they work themselves into high passions, and are frightened at spectres of their own raising. In those fits every country curate passes for an inquisitor. At other times they affect a sly facetious manner, making use of hints and allusions expressing little, insinuating much, and upon the whole seeming to divert themselves with the subject and their adversaries. But if you would know their opinions, you must make them speak out and keep close to the point. Persecution for free-thinking is a topic they are apt to enlarge on, though without any just cause, every one being at full liberty to think what he pleases, there being no such thing in England that I know as persecution for opinion, sentiment, or thought. But in every country, I suppose, some care is taken to restrain petulant speech, and, whatever men's inward thoughts may be, to dis-

courage an outward contempt of what the public esteem sacred. Whether this care in England hath of late been so excessive, as to distress the subjects of this once free and easy government, whether the free-thinkers can truly complain of any hardship upon the score of conscience or opinion, you will better be able to judge, when you hear from themselves an account of the numbers, progress, and notions, of their sect; which I doubt not they will communicate fully and freely, provided nobody present seem shocked or offended: for in that case it is possible good manners may put them upon some reserve. Oh! said Euphranor, I am never angry with any man for his opinion; whether he be Jew, Turk, or Idolator, he may speak his mind freely to me without fear of offending. I should even be glad to hear what he hath to say, provided he saith it in an ingenuous candid manner. Whoever digs in the mine of truth I look on as my fellow-labourer: but if, while I am taking true pains, he diverts himself with teasing me and flinging dust in mine eyes, I shall soon be tired of him.

V. In the mean time Alciphron and Lysicles having dispatched what they went about, returned to us. Lysicles sat down where he had been before. But Alciphron stood over against us, with his arms folded across, and his head reclined on the left shoulder, in the posture of a man meditating. We sat silent, not to disturb his thoughts; and after two or three minutes he uttered these words, Oh truth! oh liberty! after which he remained musing as before. Upon this Euphranor took the freedom to interrupt him. Alciphron, said he, it is not fair to spend your time in soliloquies. The conversation of learned and knowing men is rarely to be met with in this corner, and the opportunity you have put into my hands I value too much, not to make the best use of it. *Alc.* Are you then in earnest a votary of truth, and is it possible you should bear the liberty

of a fair inquiry? *Euph.* It is what I desire of all things. *Alc.* What! upon every subject? upon the notions you first sucked in with your milk, and which have been ever since nursed by parents, pastors, tutors, religious assemblies, books of devotion, and such methods of prepossessing men's minds. *Euph.* I love information upon all subjects that come in my way, and especially upon those that are most important. *Alc.* If then you are in earnest, hold fair and stand firm, while I probe your prejudices and extirpate your principles.

Dum veteres avias tibi de pulmone revello.

Having said thus, Alciphron knit his brows and made a short pause, after which he proceeded in the following manner. If we are at the pains to dive and penetrate into the bottom of things, and analyse opinions into their first principles, we shall find that those opinions which are thought of greatest consequence have the slightest original, being derived either from the casual customs of the country where we live, or from early instruction instilled into our tender minds, before we are able to discern between right and wrong, true and false. The vulgar (by whom I understand all those who do not make a free use of their reason) we are apt to take these prejudices for things sacred and unquestionable, believing them to be imprinted on the hearts of men by God himself, or conveyed by revelation from heaven, or to carry with them so great light and evidence as must force an assent without any inquiry or examination. Thus the shallow vulgar have their heads furnished with sundry conceits, principles, and doctrines, religious, moral, and political, all which they maintain with a zeal proportionable to their want of reason. On the other hand, those who duly employ their faculties in the search of truth, take especial care to weed out of their minds, and extirpate, all such notions or prejudices as were planted in them before they arrived at the free

and entire use of reason. This difficult task hath been successfully performed by our modern free-thinkers, who have not only dissected with great sagacity the received systems, and traced every established prejudice to the fountain-head, the true and genuine motives of assent: but also, having been able to embrace in one comprehensive view the several parts and ages of the world, they observed a wonderful variety of customs and rites, of institutions religious and civil, of notions and opinions very unlike, and even contrary one to another: a certain sign they cannot all be true. And yet they are all maintained by their several partisans with the same positive air and warm zeal, and if examined, will be found to bottom on one and the same foundation, the strength of prejudice. By the help of these remarks and discoveries, they have broke through the bands of popular custom, and having freed themselves from imposture do now generously lend a hand to their fellow-subjects, to lead them into the same paths of light and liberty. Thus, gentlemen, I have given you a summary account of the views and endeavours of those men who are called free-thinkers. If in the course of what I have said or shall say hereafter there be some things contrary to your preconceived opinions, and therefore shocking and disagreeable, you will pardon the freedom and plainness of a philosopher, and consider that, whatever displeasure I give you of that kind, I do it in strict regard to truth and obedience to your own commands. I am very sensible, that eyes long kept in the dark cannot bear a sudden view of noon-day light, but must be brought to it by degrees. It is for this reason, the ingenious gentlemen of our profession are accustomed to proceed gradually, beginning with those prejudices to which men have the least attachment, and thence proceeding to undermine the rest by slow and insensible degrees, till they have demolished the whole fabric of human folly and superstition. But the little time I can

propose to spend here obligeth me to take a shorter course, and be more direct and plain than possibly may be thought to suit with prudence and good manners. Upon this, we assured him he was at full liberty to speak his mind of things, persons, and opinions, without the least reserve. It is a liberty, replied Alciphron, that we free-thinkers are equally willing to give and take. We love to call things by their right names, and cannot endure that truth should suffer through complaisance. Let us, therefore, lay it down for a preliminary, that no offence be taken at any thing whatsoever shall be said on either side. To which we all agreed.

VI. In order then, said Alciphron, to find out the truth, we will suppose that I am bred up, for instance, in the church of England. When I come to maturity of judgment, and reflect on the particular worship and opinions of this church, I do not remember when or by what means they first took possession of my mind, but there I find them from time immemorial. Then casting an eye on the education of children, from whence I can make a judgment of my own, I observe they are instructed in religious matters before they can reason about them, and consequently that all such instruction is nothing else but filling the tender mind of a child with prejudices. I do, therefore, reject all those religious notions, which I consider as the other follies of my childhood. I am confirmed in this way of thinking, when I look abroad into the world, where I observe papists, and several sects of dissenters, which do all agree in a general profession of belief in Christ, but differ vastly one from another in the particulars of faith and worship. I then enlarge my view so as to take in Jews and Mahometans, between whom and the Christians I perceive, indeed, some small agreement in the belief of one God; but then they have each their distinct laws and revelations, for which they express the same regard. But extending my view still further to heathen-

ish and idolatrous nations, I discover an endless variety, not only in particular opinions and modes of worship, but even in the very notion of a Deity, wherein they widely differ one from another, and from all the forementioned sects. Upon the whole, instead of truth simple and uniform, I perceive nothing but discord, opposition, and wild pretensions, all springing from the same source, to wit, the prejudice of education. From such reasonings and reflections as these, thinking men have concluded that all religions are alike false and fabulous. One is a Christian, another a Jew, a third a Mahometan, a fourth an idolatrous Gentile, but all from one and the same reason, because they happen to be bred up each in his respective sect. In the same manner, therefore, as each of these contending parties condemns the rest, so an unprejudiced stander-by will condemn and reject them all together, observing, that they all draw their origin from the same fallacious principle, and are carried on by the same artifice, to answer the same ends of the priest and the magistrate.

VII. *Euph.* You hold then, that the magistrate concurs with the priest in imposing on the people. *Alc.* I do; and so must every one who considers things in a true light. For you must know, the magistrate's principal aim is to keep the people under him in awe. Now the public eye restrains men from open offences against the laws and government. But to prevent secret transgressions, a magistrate finds it expedient, that men should believe there is an eye of Providence watching over their private actions and designs. And, to intimidate those who might otherwise be drawn into crimes by the prospect of pleasure and profit, he gives them to understand, that whoever escapes punishment in this life will be sure to find it in the next; and that so heavy and lasting, as infinitely to overbalance the pleasure and profit accruing from his crimes. Hence the belief of a God, the immortality of the soul, and a future

state of rewards and punishments have been esteemed useful engines of government. And to the end that these notional airy doctrines might make a sensible impression, and be retained on the minds of men, skilful rulers have, in the several civilized nations of the earth, devised temples, sacrifices, churches, rites, ceremonies, habits, music, prayer, preaching, and the like spiritual trumpery, whereby the priest maketh temporal gains, and the magistrate findeth his account in frightening and subduing the people. This is the original of the combination between church and state, of religion by law established, of rights, immunities, and incomes, of priests all over the world: there being no government but would have you fear God, that you may honour the king or civil power. And you will ever observe, that politic princes keep up a good understanding with their clergy, to the end that they in return, by inculcating religion and loyalty into the minds of the people, may render them tame, timorous, and slavish. Crito and I heard this discourse of Alciphron with the utmost attention, though without any appearance of surprise, there being, indeed, nothing in it to us new or unexpected. But Euphranor, who had never before been present at such conversation, could not help shewing some astonishment; which Lysicles observing, asked him with a lively air, how he liked Alciphron's lecture. It is, said he, the first I believe that you ever heard of the kind, and requireth a strong stomach to digest it. *Euph.* I will own to you that my digestion is none of the quickest; but it hath sometimes, by degrees, been able to master things which at first appeared indigestible. At present I admire the free spirit and eloquence of Alciphron; but, to speak the truth, I am rather astonished than convinced of the truth of his opinions. How! (said he, turning to Alciphron) is it then possible you should not believe the being of a God? *Alc.* To be plain with you, I do not.

VIII. But this is what I foresaw, a flood of light let in at once upon the mind being apt to dazzle and disorder, rather than enlighten it. Was I not pinched in time, the regular way would be to have begun with the circumstantials of religion; next to have attacked the mysteries of Christianity; after that proceeded to the practical doctrines; and in the last place to have extirpated that which of all other religious prejudices, being the first taught and basis of the rest, hath taken the deepest root in our minds, I mean, the belief of a God. I do not wonder it sticks with you, having known several very ingenious men who found it difficult to free themselves from this prejudice. *Euph.* All men have not the same alacrity and vigour in thinking: for my own part, I find it a hard matter to keep pace with you. *Alc.* To help you, I will go a little way back, and resume the thread of my reasoning. First, I must acquaint you, that having applied my mind to contemplate the idea of truth, I discovered it to be of a stable, permanent, and uniform nature; not various and changeable, like modes or fashions, and things depending on fancy. In the next place, having observed several sects and subdivisions of sects espousing very different and contrary opinions, and yet all professing Christianity, I rejected those points wherein they differed, retaining only that which was agreed to by all; and so became a *Latitudinarian.* Having afterwards, upon a more enlarged view of things, perceived, that Christians, Jews, and Mahometans, had each their different systems of faith, agreeing only in the belief of one God, I became a *Deist.* Lastly, extending my view to all the other various nations which inhabit this globe, and finding they agreed in no one point of faith, but differed one from another, as well as from the forementioned sects, even in the notion of a God, in which there is as great diversity as in the methods of worship, I thereupon became an *Atheist:* it being my opinion that a man

of courage and sense should follow his argument wherever it leads him, and that nothing is more ridiculous than to be a free-thinker by halves. I approve the man who makes thorough work, and, not content with lopping off the branches, extirpates the very root from which they sprung.

IX. Atheism therefore, that bugbear of women and fools, is the very top and perfection of free-thinking. It is the grand *arcanum* to which a true genius naturally riseth, by a certain climax or gradation of thought, and without which he can never possess his soul in absolute liberty and repose. For your thorough conviction in this main article, do but examine the notion of a God with the same freedom that you would other prejudices. Trace it to the fountain-head, and you shall not find that you had it by any of your senses, the only true means of discovering what is real and substantial in nature: you will find it lying amongst other old lumber in some obscure corner of the imagination, the proper receptacle of visions, fancies, and prejudices, of all kinds; and if you are more attached to this than the rest, it is only because it is the oldest. This is all, take my word for it, and not mine only, but that of many more the most ingenious men of the age, who, I can assure you, think as I do on the subject of a Deity. Though some of them hold it proper to proceed with more reserve in declaring to the world their opinion in this particular, than in most others. And it must be owned, there are still too many in England who retain a foolish prejudice against the name of atheist. But it lessens every day among the better sort: and when it is quite worn out, our free-thinkers may then (and not till then) be said to have given the finishing stroke to religion; it being evident, that so long as the existence of God is believed, religion must subsist in some shape or other. But the root being once plucked up, the scions which shot from it will of course wither

and decay. Such are all those whimsical notions of conscience, duty, principle, and the like, which fill a man's head with scruples, awe him with fears, and make him a more thorough slave than the horse he rides. A man had better a thousand times be hunted by bailiffs or messengers than haunted by these spectres, which embarrass and embitter all his pleasures, creating the most real and sore servitude upon earth. But the free-thinker, with a vigorous flight of thought, breaks through those airy springes, and asserts his original independency. Others indeed may talk, and write, and fight about liberty, and make an outward pretence to it; but the free-thinker alone is truly free. Alciphron having ended this discourse with an air of triumph, Euphranor spoke to him in the following manner. You make clear work. The gentlemen of your profession are, it seems, admirable weeders. You have rooted up a world of notions: I should be glad to see what fine things you have planted in their stead. *Alc.* Have patience, good Euphranor. I will shew you in the first place, that whatever was sound and good we leave untouched, and encourage it to grow in the mind of man. And, secondly, I will shew you what excellent things we have planted in it. You must know then, that pursuing our close and severe scrutiny, we do at last arrive at something solid and real, in which all mankind agree, to wit, the appetites, passions, and senses: these are founded in nature, are real, have real objects, and are attended with real and substantial pleasures; food, drink, sleep, and the like animal enjoyments, being what all men like and love. And if we extend our view to other kinds of animals, we shall find them all agree in this, that they have certain natural appetites and senses, in the gratifying and satisfying of which they are constantly employed. Now these real natural good things which include nothing of notion or fancy, we are so far from destroying, that we do all we

can to cherish and improve them. According to us, every wise man looks upon himself, or his own bodily existence in this present world, as the centre and ultimate end of all his actions and regards. He considers his appetites as natural guides directing to his proper good, his passions and senses as the natural true means of enjoying this good. Hence he endeavours to keep his appetites in high relish, his passions and senses strong and lively, and to provide the greatest quantity and variety of real objects suited to them, which he studieth to enjoy by all possible means, and in the highest perfection imaginable. And the man who can do this without restraint, remorse, or fear, is as happy as any other animal whatsoever, or as his nature is capable of being. Thus I have given you a succinct view of the principles, discoveries, and tenets, of the select spirits of this enlightened age.

X. Crito remarked, that Alciphron had spoken his mind with great clearness. Yes, replied Euphranor, we are obliged to the gentleman for letting us at once into the tenets of his sect. But, if I may be allowed to speak my mind, Alciphron, though in compliance with my own request, hath given me no small uneasiness. You need, said Alciphron, make no apology for speaking freely what you think to one who professeth himself a free-thinker. I should be sorry to make one, whom I meant to oblige, uneasy. Pray let me know wherein I have offended. I am half ashamed, replied Euphranor, to own that I who am no great genius have a weakness incidental to little ones. I would say that I have favourite opinions, which you represent to be errors and prejudices. For instance, the immortality of the soul is a notion I am fond of, as what supports the mind with a very pleasing prospect. And if it be an error, I should perhaps be of Tully's mind, who in that case professed he should be sorry to know the truth, acknowledging no sort of obligation to certain philosophers in his days, who taught the soul of man was mortal. They were, it

seems, predecessors to those who are now called free-thinkers; which name being too general and indefinite, inasmuch as it comprehends all those who think for themselves, whether they agree in opinion with these gentleman or no, it should not seem amiss to assign them a specific appellation or peculiar name, whereby to distinguish them from other philosophers, at least in our present conference. For I cannot bear to argue against free-thinking and free-thinkers. *Alc.* In the eyes of a wise man words are of small moment. We do not think truth attached to a name. *Euph.* If you please then, to avoid confusion, let us call your sect by the same name that Tully (who understood the force of language) bestowed upon them. *Alc.* With all my heart. Pray what may that name be? *Euph.* Why, he calls them *minute philosophers*. Right, said Crito, the modern free-thinkers are the very same with those Cicero called minute philosophers, which name admirably suits them, they being a sort of sect which diminish all the most valuable things, the thoughts, views, and hopes, of men; all the knowledge, notions, and theories, of the mind they reduce to sense; human nature they contract and degrade to the narrow low standard of animal life, and assign us only a small pittance of time instead of immortality. Alciphron very gravely remarked, that the gentlemen of his sect had done no injury to man, and that if he be a little, short-lived, contemptible animal, it was not their saying it made him so: and they were no more to blame for whatever defects they discover, than a faithful glass for making the wrinkles which it only shews. As to what you observe, said he, of those we now call free-thinkers having been anciently termed *minute philosophers*, it is my opinion this appellation might be derived from their considering things minutely, and not swallowing them in the gross, as other men are used to do. Besides, we all know the best eyes are necessary to discern the minutest objects: it

seems therefore, that minute philosophers might have been so called from their distinguished perspicacity. *Euph.* O Alciphron! these minute philosophers (since that is their true name) are a sort of pirates who plunder all that come in their way. I consider myself as a man left stripped and desolate on a bleak beach.

XI. But who are these profound and learned men that of late years have demolished the whole fabric which lawgivers, philosophers, and divines, had been erecting for so many ages? Lysicles hearing these words smiled, and said, he believed Euphranor had figured to himself philosophers in square caps and long gowns: but, thanks to these happy times, the reign of pedantry was over. Our philosophers, said he, are of a very different kind from those awkward students, who think to come at knowledge by poring on dead languages and old authors, or by sequestering themselves from the cares of the world to meditate in solitude and retirement. They are the best bred men of the age, men who know the world, men of pleasure, men of fashion, and fine gentlemen. *Euph.* I have some small notion of the people you mention, but should never have taken them for philosophers. *Cri.* Nor would any one else till of late. The world it seems was long under a mistake about the way to knowledge, thinking it lay through a tedious course of academical education and study. But among the discoveries of the present age, one of the principal is the finding out that such a method doth rather retard and obstruct, than promote knowledge. *Alc.* Academical study may be comprised in two points, reading and meditation. Their reading is chiefly employed on ancient authors in dead languages: so that a great part of their time is spent in learning words; which, when they have mastered with infinite pains, what do they get by it but old and obsolete notions, that are now quite exploded and out of use? Then, as to their meditations, what can they possibly be good for? He that wants the pro-

per materials of thought, may think and meditate for ever to no purpose: those cobwebs spun by scholars out of their own brains being alike unserviceable, either for use or ornament. Proper ideas or materials are only to be got by frequenting good company. I know several gentlemen, who, since their appearance in the world, have spent as much time in rubbing off the rust and pedantry of a college education, as they had done before in acquiring it. *Lysicles.* I will undertake, a lad of fourteen, bred in the modern way, shall make a better figure, and be more considered in any drawing-room or assembly of polite people, than one at four-and-twenty, who hath lain by a long time at school and college. He shall say better things, in a better manner, and be more liked by good judges. *Euph.* Where doth he pick up all this improvement? *Cri.* Where our grave ancestors would never have looked for it, in a drawing-room, a coffee-house, a chocolate-house, at the tavern, or groom-porter's. In these and the like fashionable places of resort, it is the custom for polite persons to speak freely on all subjects, religious, moral, or political. So that a young gentleman who frequents them is in the way of hearing many instructive lectures, seasoned with wit and raillery, and uttered with spirit. Three or four sentences from a man of quality, spoken with a good air, make more impression, and convey more knowledge, than a dozen dissertations in a dry academical way. *Euph.* There is then no method or course of studies in those places? *Lys.* None but an easy free conversation, which takes in every thing that offers, without any rule or design. *Euph.* I always thought that some order was necessary to attain any useful degree of knowledge; that haste and confusion begat a conceited ignorance; that to make our advances sure, they should be gradual, and those points first learned which might cast a light on what was to follow. *Alc.* So long as learning was to be obtained only by

that slow formal course of study, few of the better sort knew much of it: but now it is grown an amusement, our young gentry and nobility imbibe it insensibly amidst their diversions, and make a considerable progress. *Euph.* Hence probably the great number of minute philosophers. *Cri.* It is to this that sect is owing for so many ingenious proficients of both sexes. You may now commonly see (what no former age ever saw) a young lady, or a *petit maitre*, nonplus a divine or an old-fashioned gentleman, who hath read many a Greek and Latin author, and spent much time in hard methodical study. *Euph.* It should seem then that method, exactness, and industry, are a disadvantage. Here Alciphron, turning to Lysicles, said he could make the point very clear, if Euphranor had any notion of painting. *Euph.* I never saw a first-rate picture in my life, but have a tolerable collection of prints, and have seen some good drawings. *Alc.* You know then the difference between the Dutch and Italian manner. *Euph.* I have some notion of it. *Alc.* Suppose now a drawing finished by the nice and laborious touches of a Dutch pencil, and another off hand scratched out in the free manner of a great Italian master. The Dutch piece, which hath cost so much pains and time, will be exact indeed, but without that force, spirit, and grace, which appear in the other, and are the effects of an easy free pencil. Do but apply this, and the point will be clear. *Euph.* Pray inform me, did those great Italian masters begin and proceed in their art without any choice of method or subject, and always draw with the same ease and freedom? Or did they observe some method, beginning with simple and elementary parts, an eye, a nose, a finger, which they drew with great pains and care, often drawing the same thing, in order to draw it correctly, and so proceeding with patience and industry, till after a considerable length of time they arrived at the free masterly manner you speak of. If this were the case,

I leave you to make the application. *Alc.* You may dispute the matter if you please. But a man of parts is one thing, and a pedant another. Pains and method may do for some sort of people. A man must be a long time kindling wet straw into a vile smothering flame, but spirits blaze out at once. *Euph.* The minute philosophers have, it seems, better parts than other men, which qualifies them for a different education? *Alc.* Tell me, Euphranor, what is it that gives one man a better mein than another; more politeness in dress, speech, and motion? Nothing but frequenting good company. By the same means men get insensibly a delicate taste, a refined judgment, a certain politeness in thinking and expressing one's self. No wonder if you countrymen are strangers to the advantage of polite conversation, which constantly keeps the mind awake and active, exercising its faculties, and calling forth all its strength and spirit on a thousand different occasions and subjects, that never came in the way of a book-worm in a college, any more than of a ploughman. *Cri.* Hence those lively faculties, that quickness of apprehension, that slyness of ridicule, that egregious talent of wit and humour, which distinguish the gentlemen of your profession. *Euph.* It should seem then that your sect is made up of what you call fine gentlemen? *Lys.* Not altogether, for we have among us some contemplative spirits of a coarser education, who, from observing the behaviour and proceedings of apprentices, watermen, porters, and the assemblies of rabble in the streets, have arrived at a profound knowledge of human nature, and made great discoveries about the principles, springs, and motives, of moral actions. These have demolished the received systems, and done a world of good in the city. *Alc.* I tell you we have men of all sorts and professions, plodding citizens, thriving stockjobbers, skilful men in business, polite courtiers, gallant men of the army; but our chief strength, and flower of the flock,

are those promising young men who have the advantage of a modern education. These are the growing hopes of our sect, by whose credit and influence in a few years we expect to see those great things accomplished that we have in view. *Euph.* I could never have imagined your sect so considerable. *Alc.* There are in England many honest folk as much in the dark about these matters as yourselves.

XII. To judge of the prevailing opinion among people of fashion, by what a senator saith in the house, a judge upon the bench, or a priest in the pulpit, who all speak according to law, that is, to the reverend prejudices of our forefathers, would be wrong. You should go into good company, and mind what men of parts and breeding say, those who are best heard and most admired, as well in public places of resort as in private visits. He only who hath these opportunities, can know our real strength, our numbers, and the figure that we make. *Euph.* By your account there must be many minute philosophers among the men of rank and fortune. *Alc.* Take my word for it, not a few, and they do much contribute to the spreading our notions. For he who knows the world must observe, that fashions constantly descend. It is therefore the right way to propagate an opinion from the upper end. Not to say, that the patronage of such men is an encouragement to our authors. *Euph.* It seems then you have authors among you? *Lys.* That we have, several, and those very great men, who have obliged the world with many useful and profound discoveries. *Cri.* Moschon, for instance, hath proved that man and beast are really of the same nature: that consequently a man need only indulge his senses and appetites to be as happy as a brute. Gorgias hath gone further, demonstrating man to be a piece of clockwork or machine; and that thought or reason is the same thing as the impulse of one ball against another. Cimon hath made noble use of these discoveries, prov-

ing as clearly as any proposition in mathematics, that conscience is a whim, and morality a prejudice; and that a man is no more accountable for his actions than a clock is for striking. Tryphon hath written irrefragably on the usefulness of vice. Thrasenor hath confuted the foolish prejudice men had against atheism, shewing that a republic of atheists might live very happily together. Demylas hath made a jest of loyalty, and convinced the world there is nothing in it: to him and another philosopher of the same stamp this age is indebted for discovering, that public spirit is an idle enthusiasm, which seizeth only on weak minds. It would be endless to recount the discoveries made by writers of this sect. *Lys.* But the master-piece and finishing stroke is a learned anecdote of our great Diagoras, containing a demonstration against the being of God: which it is conceived the public is not yet ripe for. But I am assured by some judicious friends who have seen it, that it is as clear as daylight, and will do a world of good, at one blow demolishing the whole system of religion. These discoveries are published by our philosophers, sometimes in just volumes, but often in pamphlets and loose papers for their readier conveyance through the kingdom. And to them must be ascribed that absolute and independent freedom, which groweth so fast to the terror of all bigots. Even the dull and ignorant begin to open their eyes, and be influenced by the example and authority of so many ingenious men. *Euph.* It should seem by this account that your sect extend their discoveries beyond religion; and that loyalty to his prince, and reverence for the laws, are but mean things in the eye of a minute philosopher. *Lys.* Very mean; we are too wise to think there is any thing sacred either in king or constitution, or indeed in any thing else. A man of sense may perhaps seem to pay an occasional regard to his prince; but this is no more at bottom than what he pays to God, when he kneels at the sacrament to qualify

himself for an office. Fear God, and honour the king, are a pair of slavish maxims, which had for a long time cramped human nature, and awed not only weak minds, but even men of good understanding, till their eyes, as I observed before, were opened by our philosophers. *Euph.* Methinks I can easily comprehend that; when the fear of God is quite extinguished, the mind must be very easy with respect to other duties, which become outward pretences and formalities, from the moment that they quit their hold upon the conscience, and conscience always supposeth the being of a God. But I still thought that Englishmen of all denominations (how widely soever they differ as to some particular points) agreed in the belief of a God, and of so much at least as is called natural religion. *Alc.* I have already told you my own opinion of those matters, and what I know to be the opinion of many more. *Cri.* Probably, Euphranor, by the title of Deists, which is sometimes given to minute philosophers, you have been misled to imagine they believe and worship a God according to the light of nature: but by living among them, you may soon be convinced of the contrary. They have neither time, nor place, nor form of Divine worship; they offer neither prayers nor praises to God in public; and in their private practice shew a contempt or dislike even of the duties of natural religion. For instance, the saying grace before and after meals is a plain point of natural worship, and was once universally practised; but in proportion as this sect prevailed it hath been laid aside, not only by the minute philosophers themselves, who would be infinitely ashamed of such a weakness as to beg God's blessing, or give God thanks for their daily food; but also by others who are afraid of being thought fools by the minute philosophers. *Euph.* Is it possible that men, who really believe a God, should yet decline paying so easy and reasonable a duty for fear of incurring the contempt of atheists? *Cri.* I tell you there are

many, who, believing in their hearts the truth of religion, are yet afraid or ashamed to own it, lest they should forfeit their reputation with those who have the good luck to pass for great wits and men of genius. *Alc.* O Euphranor! we must make allowance for Crito's prejudice: he is a worthy gentleman, and means well. But doth it not look like prejudice to ascribe the respect that is paid our ingenious free-thinkers rather to good luck than to merit? *Euph.* I acknowledge their merit to be very wonderful, and that those authors must needs be great men who are able to prove such paradoxes: for example, that so knowing a man as a minute philosopher should be a mere machine, or at best no better than a brute. *Alc.* It is a true maxim, that a man should think with the learned and speak with the vulgar. I should be loath to place a gentleman of merit in such a light, before prejudiced or ignorant men. The tenets of our philosophy have this in common with many other truths in metaphysics, geometry, astronomy, and natural philosophy, that vulgar ears cannot bear them. All our discoveries and notions are in themselves true and certain; but they are at present known only to the better sort, and would sound strange and odd among the vulgar. But this, it is to be hoped, will wear off with time. *Euph.* I do not wonder that vulgar minds should be startled at the notions of your philosophy. *Cri.* Truly a very curious sort of philosophy, and much to be admired.

XIII. The profound thinkers of this way have taken a direct contrary course to all the great philosophers of former ages, who made it their endeavour to raise and refine human kind, and remove it as far as possible from the brute; to moderate and subdue men's appetites; to remind them of the dignity of their nature; to awaken and improve their superior faculties, and direct them to the noblest objects; to possess men's minds with a high sense of the divinity, of the supreme good, and the immortality of the soul. They took great pains to

strengthen the obligations to virtue, and upon all those subjects have wrought out noble theories, and treated with singular force of reason. But it seems our minute philosophers act the reverse of all other wise and thinking men; it being their end and aim to erase the principles of all that is great and good from the mind of man, to unhinge all order of civil life, to undermine the foundations of morality, and, instead of improving and ennobling our natures, to bring us down to the maxims and way of thinking of the most uneducated and barbarous nations, and even to degrade human kind to a level with brute beasts. And all the while they would pass upon the world for men of deep knowledge. But, in effect, what is all this negative knowledge better than downright savage ignorance? That there is no Providence, no spirit, no future state, no moral duty: truly a fine system for an honest man to own, or an ingenious man to value himself upon! Alciphron, who heard this discourse with some uneasiness, very gravely replied, Disputes are not to be decided by the weight of authority, but by the force of reason. You may pass, indeed, general reflections on our notions, and call them brutal and barbarous if you please: but it is such brutality and such barbarism as few could have attained to if men of the greatest genius had not broken the ice, there being nothing more difficult than to get the better of education, and conquer old prejudices. To remove and cast off a heap of rubbish that has been gathering upon the soul from our very infancy, requires great courage and great strength of faculties. Our philosophers, therefore, do well deserve the name of *esprits forts*, *men of strong heads*, *free-thinkers*, and such like appellations betokening great force and liberty of mind. It is very possible, the heroic labours of these men may be represented (for what is not capable of misrepresentation?) as a piratical plundering, and stripping the mind of its wealth and ornaments, when it is in truth divest-

ing it only of its prejudices, and reducing it to its untainted original state of nature. Oh nature! the genuine beauty of pure nature! *Euph.* You seem very much taken with the beauty of nature. Be pleased to tell me, Alciphron, what those things are which you esteem natural, or by what mark I may know them.

XIV. *Alc.* For a thing to be natural, for instance, to the mind of man, it must appear originally therein, it must be universally in all men, it must be invariably the same in all nations and ages. These limitations of original, universal, and invariable, exclude all those notions found in the human mind, which are the effect of custom and education. The case is the same with respect to all other species of beings. A cat, for example, hath a natural inclination to pursue a mouse, because it agrees with the forementioned marks. But if a cat be taught to play tricks, you will not say those tricks are natural. For the same reason if upon a plum-tree peaches and apricots are engrafted, nobody will say they are the natural growth of the plum-tree. *Euph.* But to return to *man:* it seems you allow those things alone to be natural to him, which shew themselves upon his first entrance into the world; to wit, the senses and such passions and appetites as are discovered upon the first application of their respective objects. *Alc.* That is my opinion. *Euph.* Tell me, Alciphron, if from a young apple-tree after a certain period of time there should shoot forth leaves, blossoms, and apples; would you deny these things to be natural, because they did not discover and display themselves in the tender bud? *Alc.* I would not. *Euph.* And suppose that in a man after a certain season, the appetite of lust or the faculty of reason shall shoot forth, open and display themselves as leaves and blossoms do in a tree; would you, therefore, deny them to be natural to him, because they did not appear in his original infancy? *Alc.* I acknowledge I would not. *Euph.* It seems therefore, that the first

mark of a thing's being natural to the mind was not warily laid down by you; to wit, that it should appear originally in it. *Alc.* It seems so. *Euph.* Again, inform me, Alciphron, whether you do not think it natural for an orange-plant to produce oranges? *Alc.* I do. *Euph.* But plant it in the north end of Great Britain, and it shall with care produce, perhaps, a good sallad; in the southern parts of the same island, it may with much pains and culture thrive and produce indifferent fruit; but in Portugal or Naples it will produce much better with little or no pains. Is this true or not? *Alc.* It is true. *Euph.* The plant being the same in all places doth not produce the same fruit, sun, soil, and cultivation, making a difference. *Alc.* I grant it. *Euph.* And since the case is, you say, the same with respect to all species, why may we not conclude, by a parity of reason, that things may be natural to human kind, and yet neither found in all men, nor invariably the same where they are found? *Alc.* Hold, Euphranor, you must explain yourself further. I shall not be over hasty in my concessions. *Lys.* You are in the right, Alciphron, to stand upon your guard. I do not like these ensnaring questions. *Euph.* I desire you to make no concessions in complaisance to me, but only to tell me your opinion upon each particular, that we may understand one another, know wherein we agree, and proceed jointly in finding out the truth. But (added Euphranor, turning to Crito and me) if the gentlemen are against a free and fair inquiry, I shall give them no further trouble. *Alc.* Our opinions will stand the test. We fear no trial: proceed as you please. *Euph.* It seems then that, from what you have granted, it should follow, things may be natural to men, although they do not actually shew themselves in all men, nor in equal perfection; there being as great difference of culture and every other advantage with respect to human nature, as is to be found with respect to the vegetable nature of

plants, to use your own similitude, is it so or not? *Alc.* It is. *Euph.* Answer me, Alciphron, do not men in all times and places when they arrive at a certain age express their thoughts by speech? *Alc.* They do. *Euph.* Should it not seem then that language is natural? *Alc.* It should. *Euph.* And yet there is a great variety of languages. *Alc.* I acknowledge there is. *Euph.* From all this will it not follow, a thing may be natural and yet admit of variety? *Alc.* I grant it will. *Euph.* Should it not seem therefore to follow, that a thing may be natural to mankind, though it have not those marks or conditions assigned; though it be not original, universal, and invariable? *Alc.* It should. *Euph.* And that consequently religious worship and civil government may be natural to man, notwithstanding they admit of sundry forms and different degrees of perfection? *Alc.* It seems so. *Euph.* You have granted already that reason is natural to mankind. *Alc.* I have. *Euph.* Whatever therefore is agreeable to reason is agreeable to the nature of man. *Alc.* It is. *Euph.* Will it not follow from hence that truth and virtue are natural to man? *Alc.* Whatever is reasonable I admit to be natural. *Euph.* And as those fruits which grow from the most generous and mature stock, in the choicest soil, and with the best culture, are most esteemed; even so ought we not to think, those sublime truths, which are the fruits of mature thought, and have been rationally deduced by men of the best and most improved understandings, to be the choicest productions of the rational nature of man? And if so, being in fact reasonable, natural, and true, they ought not to be esteemed unnatural whims, errors of education, and groundless prejudices, because they are raised and forwarded by manuring and cultivating our tender minds, because they take early root and sprout forth betimes by the care and diligence of our instructors. *Alc.* Agreed, provided still they may be rationally deduced: but to

take this for granted of what men vulgarly call the truths of morality and religion, would be begging the question. *Euph.* You are in the right: I do not, therefore, take for granted that they are rationally deduced. I only suppose that, if they are, they must be allowed natural to man, or in other words agreeable to, and growing from, the most excellent and peculiar part of human nature. *Alc.* I have nothing to object to this. *Euph.* What shall we think then of your former assertions; that nothing is natural to man but what may be found in all men, in all nations and ages of the world; that, to obtain a genuine view of human nature, we must extirpate all the effects of education and instruction, and regard only the senses, appetites, and passions, which are to be found originally in all mankind; that, therefore, the notion of a God can have no foundation in nature, as not being originally in the mind, nor the same in all men? Be pleased to reconcile these things with your late concessions, which the force of truth seems to have extorted from you.

XV. *Alc.* Tell me, Euphranor, whether truth be not one and the same uniform invariable thing: and, if so, whether the many different and inconsistent notions which men entertain of God and duty, be not a plain proof there is no truth in them? *Euph.* That truth is constant and uniform I freely own, and that consequently opinions repugnant to each other cannot be true: but I think it will not hence follow they are all alike false. If among various opinions about the same thing, one be grounded on clear and evident reasons, that is to be thought true, and others only so far as they consist with it. Reason is the same, and rightly applied will lead to the same conclusions, in all times and places. Socrates two thousand years ago seems to have reasoned himself into the same notion of a God which is entertained by the philosophers of our days, if you will allow that name to any who are not atheists. And the remark of Con-

facious, that a man should guard in his youth against lust, in manhood against faction, and in old age against covetousness, is as current morality in Europe as in China. *Alc.* But still it would be a satisfaction if all men thought the same way, difference of opinions implying uncertainty. *Euph.* Tell me, Alciphron, what you take to be the cause of a lunar eclipse. *Alc.* The shadow of the earth interposing between the sun and moon. *Euph.* Are you assured of this? *Alc.* Undoubtedly. *Euph.* Are all mankind agreed in this truth? *Alc.* By no means. Ignorant and barbarous people assign different ridiculous causes of this appearance. *Euph.* It seems then there are different opinions about the nature of an eclipse. *Alc.* There are. *Euph.* And nevertheless one of these opinions is true. *Alc.* It is. *Euph.* Diversity therefore of opinions about a thing doth not hinder but that the thing may be, and one of the opinions concerning it may be true. *Alc.* I acknowledge it. *Euph.* It should seem, therefore, that your argument against the belief of a God from the variety of opinions about his nature is not conclusive. Nor do I see how you can conclude against the truth of any moral or religious tenet, from the various opinions of men upon the same subject. Might not a man as well argue, that no historical account of a matter of fact can be true, when different relations are given of it? Or may we not as well infer, that because the several sects of philosophy maintain different opinions, none of them can be in the right, not even the *minute philosophers* themselves? During this conversation Lysicles seemed uneasy, like one that wished in his heart there was no God. Alciphron, said he, methinks you sit by very tamely, while Euphranor saps the foundation of our tenets. Be of good courage, replied Alciphron: a skilful gamester has been known to ruin his adversary by yielding him some advantage at first. I am glad, said he, turning to Euphranor, that you are drawn in to

argue and make your appeals to reason. For my part, wherever reason leads I shall not be afraid to follow. Know then, Euphranor, that I freely give up what you now contend for. I do not value the success of a few crude notions thrown out in a loose discourse, any more than the Turks do the loss of that vile infantry they place in the front of their armies, for no other end but to waste the powder and blunt the swords of their enemies. Be assured I have in reserve a body of other-guess arguments, which I am ready to produce. I will undertake to prove—— *Euph.* O Alciphron! I do not doubt your faculty of proving. But before I put you to the trouble of any farther proofs, I should be glad to know whether the notions of your minute philosophy are worth proving. I mean, whether they are of use and service to mankind.

XVI. *Alc.* As to that, give me leave to tell you, a thing may be useful to one man's views, and not to another's: but truth is truth, whether useful or not, and must not be measured by the convenience of this or that man, or party of men. *Euph.* But is not the general good of mankind to be regarded as a rule and measure of moral truths, of all such truths as direct or influence the moral actions of men? *Alc.* That point is not clear to me. I know, indeed, that legislators, and divines, and politicians, have always alleged, that it is necessary to the well-being of mankind, that they should be kept in awe by the slavish notions of religion and morality. But granting all this, how will it prove these notions to be true? Convenience is one thing, and truth is another. A genuine philosopher, therefore, will overlook all advantages, and consider only truth itself as such. *Euph.* Tell me, Alciphron, is your genuine philosopher a wise man, or a fool? *Alc.* Without question, the wisest of men. *Euph.* Which is to be thought the wise man, he who acts with design, or he who acts at random? *Alc.* He who acts

with design. *Euph.* Whoever acts with design, acts for some end: doth he not? *Alc.* He doth. *Euph.* And a wise man for a good end? *Alc.* True. *Euph.* And he sheweth his wisdom in making choice of fit means to obtain his end? *Alc.* I acknowledge it. *Euph.* By how much therefore the end proposed is more excellent, and by how much fitter the means employed are to obtain it, so much the wiser is the agent to be esteemed? *Alc.* This seems to be true. *Euph.* Can a rational agent propose a more excellent end than happiness? *Alc.* He cannot. *Euph.* Of good things, the greater good is most excellent. *Alc.* Doubtless. *Euph.* Is not the general happiness of mankind a greater good, than the private happiness of one man, or of some certain men? *Alc.* It is. *Euph.* Is it not therefore the most excellent end? *Alc.* It seems so. *Euph.* Are not then those who pursue this end by the properest methods to be thought the wisest men? *Alc.* I grant they are. *Euph.* Which is a wise man governed by, wise or foolish notions? *Alc.* By wise, doubtless. *Euph.* It seems then to follow, that he who promotes the general well-being of mankind by the proper necessary means, is truly wise, and acts upon wise grounds. *Alc.* It should seem so. *Euph.* And is not folly of an opposite nature to wisdom? *Alc.* It is. *Euph.* Might it not therefore be inferred, that those men are foolish who go about to unhinge such principles as have a necessary connexion with the general good of mankind? *Alc.* Perhaps this might be granted: but at the same time I must observe, that it is in my power to deny it. *Euph.* How! you will not surely deny the conclusion, when you admit the premises. *Alc.* I would fain know upon what terms we argue; whether in this progress of question and answer, if a man makes a slip, it be utterly irretrievable? For if you are on the catch to lay hold of every advantage, without allowing for surprise or inattention, I must tell you this is not

the way to convince my judgment. *Euph.* O Alciphron! I aim not at triumph, but at truth. You are therefore at full liberty to unravel all that hath been said, and to recover or correct any slip you have made. But then you must distinctly point it out: otherwise it will be impossible ever to arrive at any conclusion. *Alc.* I agree with you upon these terms jointly to proceed in search of truth, for to that I am sincerely devoted. In the progress of our present inquiry I was, it seems, guilty of an oversight, in acknowledging the general happiness of mankind to be a greater good than the particular happiness of one man. For in fact the individual happiness of every man alone, constitutes his own entire good. The happiness of other men, making no part of mine, is not with respect to me a good: I mean a true natural good. It cannot therefore be a reasonable end to be proposed by me in truth and nature (for I do not speak of political pretences), since no wise man will pursue an end which doth not concern him. This is the voice of nature. Oh nature! thou art the fountain, original, and pattern, of all that is good and wise. *Euph.* You would like then to follow nature, and propose her as a guide and pattern for your imitation? *Alc.* Of all things. *Euph.* Whence do you gather this respect for nature? *Alc.* From the excellency of her productions. *Euph.* In a vegetable, for instance, you say there is use and excellency, because the several parts of it are so connected and fitted to each other, as to protect and nourish the whole, make the individual grow, and propagate the kind, and because in its fruits or qualities it is adapted to please the sense, or contribute to the benefit of man. *Alc.* Even so. *Euph.* In like manner, do you not infer the excellency of animal bodies from observing the frame and fitness of their several parts, by which they mutually conspire to the well-being of each other as well as of the whole? Do you not also observe a natural union and

consent between animals of the same kind, and that even different kinds of animals have certain qualities and instincts whereby they contribute to the exercise, nourishment, and delight, of each other? Even the inanimate unorganized elements seem to have an excellence relative to each other. Where was the excellency of water, if it did not cause herbs and vegetables to spring from the earth, and put forth flowers and fruits? And what would become of the beauty of the earth, if it was not warmed by the sun, moistened by water, and fanned by air? Throughout the whole system of the visible and natural world, do you not perceive a mutual connexion and correspondence of parts? And is it not from hence that you frame an idea of the perfection, and order, and beauty, of nature? *Alc.* All this I grant. *Euph.* And have not the Stoics heretofore said (who were no more bigots than you are), and did you not yourself say, this pattern of order was worthy the imitation of rational agents? *Alc.* I do not deny this to be true. *Euph.* Ought we not therefore to infer the same union, order, and regularity, in the moral world that we perceive to be in the natural? *Alc.* We ought. *Euph.* Should it not therefore seem to follow, that reasonable creatures were, as the philosophical Emperor * observes, made one for another; and consequently that *man* ought not to consider himself as an independent individual, whose happiness is not connected with that of other men; but rather as the part of a whole, to the common good of which he ought to conspire, and order his ways and actions suitably, if he would live according to nature? *Alc.* Supposing this to be true, what then? *Euph.* Will it not follow that a wise man should consider and pursue his private good, with regard to and in conjunction with that of other men? In granting of which, you thought yourself guilty of an oversight. Though, indeed, the sympathy of pain and pleasure, and the mu-

* M. Antonin. lib. iv.

tual affections by which mankind are knit together, have been always allowed a plain proof of this point: and though it was the constant doctrine of those who were esteemed the wisest and most thinking men among the ancients, as the Platonists, Peripatetics, and Stoics; to say nothing of Christians, whom you pronounce to be an unthinking prejudiced sort of people. *Alc.* I shall not dispute this point with you. *Euph.* Since therefore we are so far agreed, should it not seem to follow from the premises, that the belief of a God, of a future state, and of moral duties, are the only wise, right, and genuine principles of human conduct, in case they have a necessary connexion with the well-being of mankind? This conclusion you have been led to by your own concessions and by the analogy of nature. *Alc.* I have been drawn into it step by step through several preliminaries, which I cannot well call to mind: but one thing I observe, that you build on the necessary connexion those principles have with the well-being of mankind, which is a point neither proved nor granted. *Lys.* This I take to be a grand fundamental prejudice, as I doubt not, if I had time, I could make appear. But it is now late, and we will, if you think fit, defer this subject till to-morrow. Upon which motion of Lysicles, we put an end to our conversation for that evening.

THE SECOND DIALOGUE.

I. Vulgar error, that vice is hurtful. II. The benefit of drunkenness, gaming, and whoring. III. Prejudice against vice wearing off. IV. Its usefulness illustrated in the instances of Callicles and Telesilla. V. The reasoning of Lysicles in behalf of vice examined. VI. Wrong to punish actions, when the doctrines whence they flow are tolerated. VII. Hazardous experiment of the minute philosophers. VIII. Their doctrine of circulation and revolution. IX. Their sense of a reformation. X. Riches alone not the public weal. XI. Authority of minute philosophers; their prejudice against religion. XII. Effects of luxury: virtue, whether notional? XIII. Pleasure of sense. XIV. What sort of pleasure most natural to man. XV. Dignity of human nature. XVI. Pleasure mistaken. XVII. Amusements, misery, and cowardice, of minute philosophers. XVIII. Rakes cannot reckon. XIX. Abilities and success of minute philosophers. XX. Happy effects of the minute philosophy in particular instances. XXI. Their free notions about government. XXII. England the proper soil for minute philosophy. XXIII. The policy and address of its professors. XXIV. Merit of minute philosophers towards the public. XXV. Their notions and character. XXVI. Their tendency towards popery and slavery.

I. NEXT morning Alciphron and Lysicles said, the weather was so fine they had a mind to spend the day abroad, and take a cold dinner under a shade in some pleasant part of the country. Whereupon, after breakfast, we went down to a beach about half a mile off; where we walked on the smooth sand, with the ocean on one hand, and on the other wild broken rocks, intermixed with shady trees and springs of water, till the sun began to be uneasy. We then withdrew into a hollow glade, between two rocks, where we had no sooner seated ourselves but Lysicles, addressing himself to Euphranor, said, I am now ready to perform what I undertook last evening, which was to shew, there is nothing in that necessary connexion which some men imagine between those principles you contend for, and the public good.

I freely own, that if this question was to be decided by the authority of legislators or philosophers, it must go against us. For those men generally take it for granted, that vice is pernicious to the public; and that men cannot be kept from vice but by the fear of God, and the sense of a future state: whence they are induced to think the belief of such things necessary to the well-being of human kind. This false notion hath prevailed for many ages in the world, and done an infinite deal of mischief, being in truth the cause of religious establishments, and gaining the protection and encouragement of laws and magistrates to the clergy and their superstitions. Even some of the wisest among the ancients, who agreed with our sect in denying a Providence and the immortality of the soul, had nevertheless the weakness to lie under the common prejudice, that vice was hurtful to societies of men. But England hath of late produced great philosophers, who have undeceived the world, and proved to a demonstration that private vices are public benefits. This discovery was reserved to our times, and our sect hath the glory of it. *Cri.* It is possible some men of fine understanding might in former ages have had a glimpse of this important truth; but it may be presumed they lived in ignorant times and bigoted countries, which were not ripe for such a discovery. *Lys.* Men of narrow capacities and short sight, being able to see no further than one link in a chain of consequences, are shocked at small evils which attend upon vice. But those who can enlarge their view, and look through a long series of events, may behold happiness resulting from vice, and good springing out of evil in a thousand instances. To prove my point I shall not trouble you with authorities or far-fetched arguments, but bring you to plain matter of fact. Do but take a view of each particular vice, and trace it through its effects and consequences, and then you will clearly perceive the advantage it brings to the public.

II. Drunkenness, for instance, is by your sober moralists thought a pernicious vice; but it is for want of considering the good effects that flow from it. For, in the first place, it increases the malt tax, a principal branch of his majesty's revenue, and thereby promotes the safety, strength, and glory, of the nation. Secondly, it employs a great number of hands, the brewer, the maltster, the ploughman, the dealer in hops, the smith, the carpenter, the brazier, the joiner, with all other artificers necessary to supply those enumerated with their respective instruments and utensils. All which advantages are procured from drunkenness in the vulgar way, by strong beer. This point is so clear it will admit of no dispute. But while you are forced to allow thus much, I foresee you are ready to object against drunkenness occasioned by wine and spirits, as exporting wealth into foreign countries. But you do not reflect on the number of hands which even this sets on work at home: the distillers, the vintners, the merchants, the sailors, the shipwrights, with all those who are employed towards victualling and fitting out ships, which upon a nice computation will be found to include an incredible variety of trades and callings. Then for freighting our ships to answer these foreign importations, all our manufacturers throughout the kingdom are employed, the spinners, the weavers, the dyers, the wool-combers, the carriers, the packers. And the same may be said of many other manufacturers, as well as the woollen. And if it be further considered how many men are enriched by all the forementioned ways of trade and business, and the expenses of these men and their families, in all the several articles of convenient and fashionable living, whereby all sorts of trades and callings, not only at home, but throughout all parts wherever our commerce reaches, are kept in employment; you will be amazed at the wonderfully-extended scene of benefits which arises from the single vice of drunkenness, so much run down and

declaimed against by all grave reformers. With as much judgment your half-witted folk are accustomed to censure gaming. And indeed (such is the ignorance and folly of mankind) a gamester and a drunkard are thought no better than public nuisances, when in truth they do each in their way greatly conduce to the public benefit. If you look only on the surface and first appearance of things, you will no doubt think playing at cards a very idle and fruitless occupation. But dive deeper, and you shall perceive this idle amusement employs the card-maker, and he sets the paper-mills at work, by which the poor rag-man is supported; not to mention the builders and workers in wood and iron that are employed in erecting and furnishing those mills. Look still deeper and you shall find that candles and chair-hire employ the industrious and the poor, who by these means come to be relieved by sharpers and gentlemen, who would not give one penny in charity. But you will say, that many gentlemen and ladies are ruined by play, without considering that what one man loses another gets, and that consequently as many are made as ruined: money changeth hands, and in this circulation the life of business and commerce consists. When money is spent, it is all one to the public who spends it. Suppose a fool of quality becomes the dupe of a man of mean birth and circumstance, who has more wit? In this case what harm doth the public sustain? Poverty is relieved, ingenuity is rewarded, the money stays at home, and has a lively circulation, the ingenious sharper being enabled to set up an equipage and spend handsomely, which cannot be done without employing a world of people. But you will perhaps object, that a man reduced by play may be put upon desperate courses, hurtful to the public. Suppose the worst, and that he turns highwayman; such men have a short life and a merry. While he lives, he spends, and for one that he robs makes twenty the better for his expense. And when his time is come, a poor

family may be relieved by fifty or a hundred pounds set upon his head. A vulgar eye looks on many a man as an idle or mischievous fellow, whom a true philosopher, viewing in another light, considers as a man of pleasant occupation, who diverts himself, and benefits the public, and that with so much ease, that he employs a multitude of men, and sets an infinite machine in motion, without knowing the good he does, or even intending to do any: which is peculiar to that gentleman-like way of doing good by vice. I was considering play, and that insensibly led me to the advantages which attend robbing on the highway. Oh the beautiful and never-enough-admired connexion of vices! It would take too much time to shew how they all hang together, and what an infinite deal of good takes its rise from every one of them. One word for a favourite vice, and I shall leave you to make out the rest yourself by applying the same way of reasoning to all other vices. A poor girl, who might not have the spending of half-a-crown a week in what you call an honest way, no sooner hath the good fortune to be a kept-mistress, but she employs milliners, laundresses, tire-women, mercers, and a number of other trades, to the benefit of her country. It would be endless to trace and pursue every particular vice through its consequences and effects, and shew the vast advantage they all are of to the public. The true springs that actuate the great machine of commerce, and make a flourishing state, have been hitherto little understood. Your moralists and divines have for so many ages been corrupting the genuine sense of mankind, and filling their heads with such absurd principles, that it is in the power of few men to contemplate real life with an unprejudiced eye. And fewer still have sufficient parts and sagacity to pursue a long train of consequences, relations, and dependences, which must be done in order to form a just and entire notion of the public weal. But, as I said before, our sect hath produced men capable of these discoveries, who

have displayed them in full light, and made them public for the benefit of their country.

III. Oh! said Euphranor, who heard this discourse with great attention, you, Lysicles, are the very man I wanted, eloquent and ingenious, knowing in the principles of your sect, and willing to impart them. Pray tell me, do these principles find an easy admission in the world? *Lys.* They do among ingenious men and people of fashion, though you will sometimes meet with strong prejudices against them in the middle sort, an effect of ordinary talents and mean breeding. *Euph.* I should wonder if men were not shocked at notions of such a surprising nature, so contrary to all laws, education, and religion. *Lys.* They would be shocked much more if it had not been for the skilful address of our philosophers, who, considering that most men are influenced by names rather than things, have introduced a certain polite way of speaking, which lessens much of the abhorrence and prejudice towards vice. *Euph.* Explain me this. *Lys.* Thus in our dialect, a vicious man is a man of pleasure, a sharper is one that plays the whole game, a lady is said to have an affair, a gentleman to be a gallant, a rogue in business to be one that knows the world. By this means we have no such things as sots, debauchees, whores, rogues, or the like, in the *beau monde*, who may enjoy their vices without incurring disagreeable appellations. *Euph.* Vice then is, it seems, a fine thing with an ugly name. *Lys.* Be assured it is. *Euph.* It should seem then, that Plato's fearing lest youth might be corrupted by those fables which represented the gods vicious, was an effect of his weakness and ignorance. *Lys.* It was, take my word for it. *Euph.* And yet Plato had kept good company, and lived in a court! And Cicero, who knew the world well, had a profound esteem for him! *Cri.* I tell you, Euphranor, that Plato and Tully might perhaps make a figure in Athens or Rome: but were they to revive in our days, they would pass but for underbred

pedants, there being at most coffee-houses in London, several able men who could convince them they knew nothing (in what they are valued so much for) morals and politics. *Lys.* How many long-headed men do I know, both in the court-end and the city, with five times Plato's sense, who care not one straw what notions their sons have of God or virtue.

IV. *Cri.* I can illustrate this doctrine of Lysicles by examples that will make you perceive its force. Cleophon, a minute philosopher, took strict care of his son's education, and entered him betimes in the principles of his sect. Callicles (that was his son's name) being a youth of parts made a notable progress; insomuch that before he became of age he killed his old covetous father with vexation, and ruined the estate he left behind him; or, in other words, made a present of it to the public, spreading the dunghill collected by his ancestors over the face of the nation, and making out of one overgrown estate several pretty fortunes for ingenious men, who live by the vices of the great. Telesilla, though a woman of quality and spirit, made no figure in the world, till she was instructed by her husband in the tenets of minute philosophy, which he wisely thought would prevent her giving any thing in charity. From that time she took a turn towards expensive diversions, particularly deep play, by which means she soon transferred a considerable share of his fortune to several acute men skilled in that mystery, who wanted it more, and circulated it quicker, than her husband would have done, who in return hath got an heir to his estate, having never had a child before. The same Telesilla, who was good for nothing as long as she believed her catechism, now shines in all public places, is a lady of gallantry and fashion, and has, by her extravagant parade in lace and fine clothes, raised a spirit of expense in other ladies, very much to the public benefit, though it must be owned to the mortification of many frugal husbands. While Crito related

these facts with a grave face, I could not forbear smiling, which Lysicles observing, Superficial minds, said he, may perhaps find something to ridicule in these accounts; but all who are masters of a just way of thinking must needs see that those maxims, the benefit whereof is universal, and the damage only particular to private persons or families, ought to be encouraged in a wise commonwealth. For my part, said Euphranor, I confess myself to be rather dazzled and confounded than convinced by your reasoning; which, as you observed yourself, taking in the connexion of many distant points, requires great extent of thought to comprehend it. I must therefore intreat you to bear with my defects, suffer me to take to pieces what is too big to be received at once; and, where I cannot keep pace with you, permit me to follow you step by step, as fast as I can. *Lys.* There is reason in what you say. Every one cannot suddenly take a long concatenation of arguments.

Euph. Your several arguments seem to centre in this, that vice circulates money and promotes industry, which cause a people to flourish: is it not so? *Lys.* It is. *Euph.* And the reason that vice produceth this effect is, because it causeth an extravagant consumption, which is the most beneficial to the manufactures, their encouragement consisting in a quick demand and high price? *Lys.* True. *Euph.* Hence you think a drunkard most beneficial to the brewer and the vintner, as causing a quick consumption of liquor, inasmuch as he drinks more than other men? *Lys.* Without doubt. *Euph.* Say, Lysicles, who drinks most, a sick man or a healthy? *Lys.* A healthy. *Euph.* And which is healthier, a sober man or a drunkard? *Lys.* A sober man. *Euph.* A sober man therefore in health may drink more than a drunkard when he is sick? *Lys.* He may. *Euph.* What think you, will a man consume more meat and drink in a long life or a short one? *Lys.* In a long. *Euph.* A sober healthy man, there-

fore, in a long life, may circulate more money by eating and drinking, than a glutton or drunkard in a short one? *Lys.* What then? *Euph.* Why then it should seem, that he may be more beneficial to the public even in this way of eating and drinking. *Lys.* I shall never own that temperance is the way to promote drinking. *Euph.* But you will own that sickness lessens, and death puts an end to, all drinking? The same argument will hold, for aught I can see, with respect to all other vices that impair men's health and shorten their lives. And if we admit this, it will not be so clear a point that vice hath merit towards the public. *Lys.* But admitting that some artificers or traders might be as well encouraged by the sober men as the vicious; what shall we say of those who subsist altogether by vice and vanity? *Euph.* If such there are, may they not be otherwise employed without loss to the public? Tell me, Lysicles, is there any thing in the nature of vice, as such, that renders it a public blessing, or is it only the consumption it occasions? *Lys.* I have already shewn how it benefits the nation by the consumption of its manufactures. *Euph.* And you have granted that a long and healthy life consumes more than a short and sickly one; and you will not deny, that many consume more than one? Upon the whole then compute and say, which is most likely to promote the industry of his countrymen, a virtuous married man with a healthy numerous offspring, and who feeds and clothes the orphans in his neighbourhood, or a fashionable rake about town? I would fain know whether money spent innocently doth not circulate as well as that spent upon vice? And if so, whether by your own rule it doth not benefit the public as much? *Lys.* What I have proved, I proved plainly, and there is no need of more words about it. *Euph.* You seem to me to have proved nothing, unless you can make it out that it is impossible to spend a fortune innocently. I should think the public weal of a nation

consists in the number and good condition of its inhabitants; have you any thing to object to this? *Lys.* I think not. *Euph.* To this end which would most conduce, the employing men in open air and manly exercise, or in a sedentary business within doors? *Lys.* The former I suppose. *Euph.* Should it not seem therefore, that building, gardening, and agriculture, would employ men more usefully to the public, than if tailors, barbers, perfumers, distillers, and such arts, were multiplied? *Lys.* All this I grant; but it makes against you. For what moves men to build and plant but vanity, and what is vanity but vice? *Euph.* But if a man should do those things for his convenience or pleasure, and in proportion to his fortune, without a foolish ostentation or overrating them beyond their due value, they would not then be the effect of vice; and how do you know but this may be the case? *Cri.* One thing I know, that the readiest way to quicken that sort of industry, and employ carpenters, masons, smiths, and all such trades, would be to put in practice the happy hint of a celebrated minute philosopher, who by profound thinking has discovered, that burning the city of London would be no such bad action, as silly prejudiced people might possibly imagine; inasmuch as it would produce a quick circulation of property, transferring it from the rich to the poor, and employing a great number of artificers of all kinds. This, at least, cannot be denied, that it hath opened a new way of thinking to our incendiaries, of which the public hath of late begun to reap the benefit. *Euph.* I cannot sufficiently admire this ingenious thought.

VI. But methinks it would be dangerous to make it public. *Cri.* Dangerous to whom? *Euph.* In the first place to the publisher. *Cri.* That is a mistake; for the notion hath been published and met with due applause, in this most wise and happy age of free-thinking, free-speaking, free-writing, and free-acting. *Euph.*

How! may a man then publish and practise such things with impunity? *Cri.* To speak the truth, I am not so clear as to the practic part. An unlucky accident now and then befals an ingenious man. The minute philosopher Magirus, being desirous to benefit the public, by circulating an estate possessed by a near relation who had not the heart to spend it, soon convinced himself, upon these principles, that it would be a very worthy action to dispatch out of the way such a useless fellow, to whom he was next heir. But for this laudable attempt, he had the misfortune to be hanged by an underbred judge and jury. Could any thing be more unjust? *Euph.* Why unjust? *Cri.* Is it not unjust to punish actions, when the principles from which they directly follow are tolerated and applauded by the public? Can any thing be more inconsistent than to condemn in practice what is approved in speculation? Truth is one and the same, it being impossible a thing should be practically wrong and speculatively right. Thus much is certain, Magirus was perfect master of all this theory, and argued most acutely about it with a friend of mine, a little before he did the fact for which he died. *Lys.* The best of it is the world every day grows wiser. *Cri.* You mistake, Euphranor, if you think the minute philosophers idle theorists; they are men of practical views. *Euph.* As much as I love liberty, I should be afraid to live among such people; it would be, as Seneca somewhere expresseth it, *in libertate bellis ac tyrannis sæviore.* *Lys.* What do you mean by quoting Plato and Seneca? Can you imagine a free-thinker is to be influenced by the authority of such old-fashioned writers? *Euph.* You, Lysicles, and your friend, have often quoted to me ingenious moderns, profound fine gentlemen, with new names of authors in the minute philosophy, to whose merits I am a perfect stranger. Suffer me in my turn to cite such authorities as I know, and have passed for many ages upon the world.

VII. But, authority apart, what do you say to experience? My observation can reach as far as a private family; and some wise men have thought, a family may be considered as a small kingdom, or a kingdom as a great family. Do you admit this to be true? *Lys.* If I say *yes*, you will make an inference, and if I say *no*, you will demand a reason. The best way is to say nothing at all. There is, I see, no end of answering. *Euph.* If you give up the point you undertook to prove, there is an end at once: but if you hope to convince me you must answer my questions, and allow me the liberty to argue and infer. *Lys.* Well, suppose I admit that a kingdom may be considered as a great family. *Euph.* I shall ask you then, whether ever you knew private families thrive by those vices you think so beneficial to the public? *Lys.* Suppose I have not. *Euph.* Might not a man therefore by a parity of reason suspect their being of that benefit to the public? *Lys.* Fear not; the next age will thrive and flourish. *Euph.* Pray tell me, Lysicles; suppose you saw a fruit of a new untried kind; would you recommend it to your own family to make a full meal of? *Lys.* I would not. *Euph.* Why then would you try upon your own country these maxims which were never admitted in any other. *Lys.* The experiment must begin somewhere; and we are resolved our own country shall have the honour and advantage of it. *Euph.* O Lysicles, hath not old England subsisted for many ages without the help of your notions? *Lys.* She has. *Euph.* And made some figure? *Lys.* I grant it. *Euph.* Why then should you make her run the risk of a new experiment, when it is certain she may do without it? *Lys.* But we would make her do better. We would produce a change in her that never was seen in any nation. *Euph.* Sallust observes, that a little before the downfal of the Roman empire, avarice (the effect of luxury) had erased the good old principles of probity and justice, had produced a contempt for

religion, and made every thing venal, while ambition bred dissimulation, and caused men to unite in clubs and parties, not from honourable motives, but narrow and interested views. The same historian observes of that great free-thinker Catiline, that he made it his business to insinuate himself into the acquaintance of young men, whose minds, unimproved by years and experience, were more easily seduced. I know not how it happens, but these passages have occurred to my thoughts more than once during this conversation. *Lys.* Sallust was a sententious pedant. *Euph.* But consult any historian, look into any writer. See, for instance, what Xenophon and Livy say of Sparta and Rome, and then tell me if vice be not the likeliest way to ruin and enslave a people. *Lys.* When a point is clear by its own evidence, I never think it worth while to consult old authors about it. *Cri.* It requires much thought and delicate observation to go to the bottom of things. But one who hath come at truth with difficulty can impart it with ease. I will, therefore, Euphranor, explain to you in three words (what none of your old writers ever dreamt of) the true cause of ruin to those states. You must know that vice and virtue, being opposite and contradictory principles, both working at once in a state, will produce contrary effects, which intestine discord must needs tend to the dissolution and ruin of the whole. But it is the design of our minute philosophers, by making men wicked upon principle, a thing unknown to the ancients, so to weaken and destroy the force of virtue, that its effects shall not be felt in the public. In which case vice being uncontrolled without let or impediment of principle, pure and genuine without allay of virtue, the nation must doubtless be very flourishing and triumphant. *Euph.* Truly, a noble scheme! *Cri.* And in a fair way to take effect. For our young proficients in the minute philosophy, having, by a rare felicity of education, no tincture of

bigotry or prejudice, do far outgo the old standers and professors of the sect; who, though men of admirable parts, yet, having had the misfortune to be imbued in their childhood with some religious notions, could never after get entirely rid of them; but still retain some small grains of conscience and superstition, which are a check upon the noblest genius. In proof of this, I remember that the famous minute philosopher, old Demodicus, came one day, from conversation upon business with Timander, a young gentleman of the same sect, full of astonishment. I am surprised, said he, to see so young, and withal so complete a villain; and, such was the force of prejudice, spoke of Timander with abhorrence, not considering that he was only the more egregious and profound philosopher of the two.

VIII. *Euph.* Though much may be hoped from the unprejudiced education of young gentleman, yet it seems we are not to expect a settled and entire happiness, before vice reigns pure and unmixed: till then, much is to be feared from the dangerous struggle between vice and virtue, which may perchance overturn and dissolve this government, as it hath done others. *Lys.* No matter for that, if a better comes in its place. We have cleared the land of all prejudices towards government or constitution, and made them fly like other phantasms before the light of reason and good sense. Men who think deeply cannot see any reason, why power should not change hands as well as property; or why the fashion of a government should not be changed as easy as that of a garment. The perpetual circulating and revolving of wealth and power, no matter through what or whose hands, is that which keeps up life and spirit in a state. Those who are even slightly read in our philosophy, know that of all prejudices, the silliest is an attachment to forms. *Cri.* To say no more upon so clear a point, the overturning of a government may be justified upon the same principles as the burning a

town, would produce parallel effects, and equally contribute to the public good. In both cases, the natural springs of action are forcibly exerted: and in this general industry what one loses another gets, a quick circulation of wealth and power making the sum total to flourish. *Euph.* And do the minute philosophers publish these things to the world? *Lys.* It must be confessed our writers proceed in politics with greater caution than they think necessary with regard to religion. *Cri.* But those things plainly follow from their principles, and are to be admitted for the genuine doctrine of the sect, expressed perhaps with more freedom and perspicuity, than might be thought prudent by those who would manage the public, or not offend weak brethren. *Euph.* And pray, is there not need of caution, a rebel or incendiary being characters that many men have a prejudice against? *Lys.* Weak people of all ranks have a world of absurd prejudices. *Euph.* But the better sort, such as statesmen and legislators; do you think they have not the same indisposition towards admitting your principles? *Lys.* Perhaps they may; but the reason is plain. *Cri.* This puts me in mind of that ingenious philosopher, the gamester Glaucus, who used to say, that statesmen and lawgivers may keep a stir about right and wrong, just and unjust, but that, in truth, property of every kind had so often passed from the right owners by fraud and violence, that it was now to be considered as lying on the common, and with equal right belonged to every one that could seize it. *Euph.* What are we to think then of laws and regulations relating to right and wrong, crimes and duties? *Lys.* They serve to bind weak minds, and keep the vulgar in awe: but no sooner doth a true genius arise, but he breaks his way to greatness through all the trammels of duty, conscience, religion, law; to all which he sheweth himself infinitely superior.

IX. *Euph.* You are, it seems, for bringing about a

thorough reformation? *Lys.* As to what is commonly called the Reformation, I could never see how or wherein the world was the better for it. It is much the same as popery, with this difference, that it is the more prude-like and disagreeable thing of the two. A noted writer of ours makes it too great a compliment, when he computes the benefit of hooped petticoats to be nearly equal to that of the Reformation. Thorough reformation is thorough liberty. Leave nature at full freedom to work her own way, and all will be well. This is what we aim at, and nothing short of this can come up to our principles.—Crito, who is a zealous protestant, hearing these words, could not refrain. The worst effect of the Reformation, said he, was the rescuing wicked men from a darkness which kept them in awe. This, as it hath proved, was holding out light to robbers and murderers. Light in itself is good, and the same light which shews a man the folly of superstition, might shew him the truth of religion, and the madness of atheism. But to make use of light, only to see the evils on one side, and never to see, but to run blindly upon the worse extreme, this is to make the best of things produce evil, in the same sense that you prove the worst of things to produce good, to wit, accidentally or indirectly: and by the same method of arguing, you may prove that even diseases are useful: but whatever benefit seems to accrue to the public, either from disease of mind or body, is not their genuine offspring, and may be obtained without them. Lysicles was a little disconcerted by the affirmative air of Crito; but after a short pause replied briskly, that to contemplate the public good was not every one's talent. True, said Euphranor, I question whether every one can frame a notion of the public good, much less judge of the means to promote it.

X. But you, Lysicles, who are master of this subject, will be pleased to inform me, whether the public good of a nation doth not imply the particular good of its in-

dividuals? *Lys.* It doth. *Euph.* And doth not the good or happiness of a man consist, in having both soul and body sound and in good condition, enjoying those things which their respective natures require, and free from those things which are odious or hurtful to them? *Lys.* I do not deny all this to be true. *Euph.* Now it should seem worth while to consider, whether the regular decent life of a virtuous man may not as much conduce to this end, as the mad sallies of intemperance and debauchery. *Lys.* I will acknowledge that a nation may merely subsist, or be kept alive, but it is impossible it should flourish without the aid of vice. To produce a quick circulation of traffic and wealth in a state, there must be exorbitant and irregular motions in the appetites and passions. *Euph.* The more people a nation contains, and the happier those people are, the more that nation may be said to flourish. I think we are agreed in this point. *Lys.* We are. *Euph.* You allow then that riches are not an ultimate end, but should only be considered as the means to procure happiness. *Lys.* I do. *Euph.* It seems, that means cannot be of use without our knowing the end, and how to apply them to it? *Lys.* It seems so. *Euph.* Will it not follow, that in order to make a nation flourish, it is not sufficient to make it wealthy, without knowing the true end and happiness of mankind, and how to apply wealth towards attaining that end? In proportion as these points are known and practised, I think the nation should be likely to flourish. But for a people who neither know nor practise them, to gain riches, seems to me the same advantage that it would be for a sick man to come at plenty of meat and drink, which he could not use but to his hurt. *Lys.* This is mere sophistry; it is arguing without persuading. Look into common life; examine the pursuits of men; have a due respect for the consent of the world; and you will soon be convinced, that riches alone are sufficient to make a nation

flourishing and happy. Give them riches, and they will make themselves happy, without that political invention, that trick of statesmen and philosophers, called virtue.

XI. *Euph.* Virtue then, in your account, is a trick of statesmen? *Lys.* It is. *Euph.* Why then do your sagacious sect betray and divulge that trick or secret of state, which wise men have judged necessary for the good government of the world? Lysicles hesitating, Crito made answer, that he presumed it was because their sect being wiser than all other wise men, disdained to see the world governed by wrong maxims, and would set all things on a right bottom. *Euph.* Thus much is certain. If we look into all institutions of government, and the political writings of such as have heretofore passed for wise men, we shall find a great regard for virtue. *Lys.* You shall find a strong tincture of prejudice; but, as I said before, consult the multitude if you would find nature and truth. *Euph.* But among country gentlemen, and farmers, and the better sort of tradesmen, is not virtue a reputable thing? *Lys.* You pick up authorities among men of low life and vile education. *Euph.* Perhaps we ought to pay a decent respect to the authority of minute philosophers. *Lys.* And I would fain know whose authority should be more considered, than that of those gentlemen, who are alone above prejudice, and think for themselves. *Euph.* How doth it appear that you are the only unprejudiced part of mankind? May not a minute philosopher, as well as another man, be prejudiced in favour of the leaders of his sect? May not an atheistical education prejudice towards atheism? What should hinder a man's being prejudiced against religion, as well as for it? Or can you assign any reason why an attachment to pleasure, interest, vice, or vanity, may not be supposed to prejudice men against virtue? *Lys.* This is pleasant. What! suppose those very men influenced by prejudice, who are always disputing against it, whose constant aim it is to

detect and demolish prejudices of all kinds! Except their own, replied Crito, for you must pardon me, if I cannot help thinking they have some small prejudice, though not in favour of virtue.

XII. I observe, Lysicles, that you allowed to Euphranor, the greater number of happy people are in a state, the more that state may be said to flourish: it follows therefore, that such methods as multiply inhabitants are good, and such as diminish them are bad, for the public. And one would think nobody need be told, that the strength of a state consists more in the number and sort of people, than in any thing else. But in proportion as vice and luxury, those public blessings encouraged by this minute philosophy, prevail among us, fewer are disposed to marry, too many being diverted by pleasure, disabled by disease, or frightened by expense. Nor doth vice only thin a nation, but also debaseth it by a puny degenerate race. I might add, that it is ruinous to our manufactures, both as it makes labour dear, and thereby enables our more frugal neighbours to undersell us; and also as it diverts the lower sort of people from honest callings to wicked projects. If these and such considerations were taken into the account, I believe it would be evident to any man in his senses, that the imaginary benefits of vice bear no proportion to the solid real woes that attend it. Lysicles, upon this, shook his head, and smiled at Crito, without vouchsafing any other answer. After which, addressing himself to Euphranor, There cannot, said he, be a stronger instance of prejudice, than that a man should at this time of day preserve a reverence for that idol virtue, a thing so effectually exposed and exploded by the most knowing men of the age, who have shewn, that a man is a mere engine, played upon and driven about by sensible objects; and that moral virtue is only a name, a notion, a chimera, an enthusiasm, or at best a fashion, uncertain and changeable, like all other fashions. *Euph.*

What do you think, Lysicles, of health; doth it depend on fancy and caprice, or is it something real in the bodily composition of a man? *Lys.* Health is something real, which results from the right constitution and temperature of the organs and the fluids circulating through them. *Euph.* This you say is health of body? *Lys.* It is. *Euph.* And may we not suppose a healthy constitution of soul, when the notions are right, the judgments true, the will regular, the passions and appetites directed to their proper objects, and confined within due bounds? This, in regard to the soul, seems what health is to the body. And the man whose mind is so constituted, is he not properly called virtuous? And to produce this healthy disposition in the minds of his countrymen, should not every good man employ his endeavours? If these things have any appearance of truth, as to me they seem to have, it will not then be so clear a point that virtue is a mere whim or fashion, as you are pleased to represent it: I must own something unexpectedly, after what had been discoursed in last evening's conference, which, if you would call to mind, might perhaps save both of us some trouble. *Lys.* Would you know the truth, Euphranor? I must own I have quite forgot all your discourse about virtue, duty, and all such points, which, being of an airy notional nature, are apt to vanish, and leave no trace on a mind accustomed only to receive impression from realities.

XIII. Having heard these words, Euphranor looked at Crito and me, and said smiling, I have mistaken my part; it was mine to learn, and his to instruct. Then addressing himself to Lysicles, Deal faithfully, said he, and let me know whether the public benefit of vice be in truth that which makes you plead for it? *Lys.* I love to speak frankly what I think. Know then, that private interest is the first and principal consideration with philosophers of our sect. Now of all interests pleasure is that which hath the strongest charms, and no pleasures like those which are heightened and enlivened

by licence. Herein consists the peculiar excellency of our principles, that they shew people how to serve their country by diverting themselves, causing the two streams of public spirit and self-love to unite and run in the same channel. I have told you already, that I admit a nation might subsist by the rules of virtue. But give me leave to say, it will barely subsist, in a dull joyless insipid state, whereas the sprightly excesses of vice inspire men with joy: and where particulars rejoice, the public, which is made up of particulars, must do so too; that is, the public must be happy. This I take to be an irrefragable argument. But to give you its full force, and make it as plain as possible, I will trace things from their original. Happiness is the end to which created beings naturally tend, but we find that all animals, whether men or brutes, do naturally and principally pursue real pleasure of sense, which is therefore to be thought their supreme good, their true end and happiness. It is for this men live, and whoever understands life must allow that man to enjoy the top and flower of it, who hath a quick sense of pleasure, and withal spirit, skill, and fortune, sufficient to gratify every appetite and every taste. Niggards and fools will envy or traduce such a one because they cannot equal him. Hence, all that sober trifling in disparagement of what every one would be master of if he could, a full freedom and unlimited scope of pleasure. *Euph.* Let me see whether I understand you. Pleasure of sense, you say, is the chief pleasure? *Lys.* I do. *Euph.* And this would be cramped and diminished by virtue? *Lys.* It would. *Euph.* Tell me, Lysicles, is pleasure then at the height when the appetites are satisfied? *Lys.* There is then only an indolence, the lively sense of pleasure being past. *Euph.* It should seem therefore, that the appetites must be always craving to preserve pleasure alive? *Lys.* That is our sense of the matter. *Euph.* The Greek philosopher therefore was in the right, who considered the body of a man of pleasure as a leaky vessel, always filling and

never full. *Lys.* You may divert yourself with allegories, if you please. But all the while ours is literally the true taste of nature. Look throughout the universe; and you shall find birds and fishes, beasts and insects, all kinds of animals, with which the creation swarms, constantly engaged by instinct in the pursuit of sensible pleasure. And shall man alone be the grave fool who thwarts, and crosses, and subdues, his appetites, whilst his fellow-creatures do all most joyfully and freely indulge them? *Euph.* How! Lysicles, I thought that being governed by the senses, appetites, and passions, was the most grievous slavery; and that the proper business of free-thinkers, or philosophers, had been to set men from the power of ambition, avarice, and sensuality! *Lys.* You mistake the point. We make men relish the world, attentive to their interests, lively and luxurious in their pleasures, without fear or restraint either from God or man. We despise those preaching writers, who used to disturb or cramp the pleasures and amusements of human life. We hold, that a wise man who meddles with business, doth it altogether for his interest, and refers his interest to his pleasure. With us it is a maxim, that a man should seize the moments as they fly. Without love, and wine, and play, and late hours, we hold life not to be worth living. I grant, indeed, that there is something gross and ill-bred in the vices of mean men, which the genteel philosopher abhors. *Cri.* But to cheat, whore, betray, get drunk, do all these things decently, this is true wisdom, and elegance of taste.

XIV. *Euph.* To me, who have been used to another way of thinking, this new philosophy seems difficult to digest. I must therefore beg leave to examine its principles, with the same freedom that you do those of other sects. *Lys.* Agreed. *Euph.* You say, if I mistake not, that a wise man pursues only his private interest, and that this consists in sensual pleasure, for proof whereof you appeal to nature. Is not this what you advance?

Lys. It is. *Euph.* You conclude therefore, that as other animals are guided by natural instinct, man too ought to follow the dictates of sense and appetite? *Lys.* I do. *Euph.* But in this do you not argue as if man had only sense and appetite for his guides, on which supposition there might be truth in what you say? But what if he hath intellect, reason, a higher instinct and a nobler life? If this be the case, and you, being man, live like a brute, is it not the way to be defrauded of your true happiness? to be mortified and disappointed? Consider most sort of brutes, you shall perhaps find them have a greater share of sensual happiness than man. *Lys.* To our sorrow we do. This hath made several gentleman of our sect envy brutes, and lament the lot of human kind. *Cri.* It was a consideration of this sort which inspired Erotylus, with the laudable ambition of wishing himself a snail upon hearing of certain particularities discovered in that animal by a modern virtuoso. *Euph.* Tell me, Lysicles, if you had an inexhaustible fund of gold and silver, should you envy another for having a little more copper than you? *Lys.* I should not. *Euph.* Are not reason, imagination, and sense, faculties differing in kind, and in rank higher one than another? *Lys.* I do not deny it. *Euph.* Their acts therefore differ in kind? *Lys.* They do. *Euph.* Consequently the pleasures perfective of those acts are also different. *Lys.* They are. *Euph.* You admit therefore three sorts of pleasure; pleasure of reason, pleasure of imagination, and pleasure of sense. *Lys.* I do. *Euph.* And, as it is reasonable to think, the operation of the highest and noblest faculty to be attended with the highest pleasure, may we not suppose the two former to be as gold or silver, and the latter only as copper? whence it should seem to follow, that man need not envy or imitate a brute. *Lys.* And nevertheless there are very ingenious men who do. And surely every one may be allowed to know what he wants and wherein his true happiness consists. *Euph.* Is it

not plain that different animals have different pleasures? Take a hog from his ditch or dunghill, lay him on a rich bed, treat him with sweetmeats, and music, and perfumes. All these things will be no entertainment to him. Do not a bird, a beast, a fish, amuse themselves in various manners, insomuch that what is pleasing to one may be death to another? Is it ever seen that one of those animals quits its own element or way of living, to adopt that of another? and shall man quit his own nature to imitate a brute? *Lys.* But sense is not only natural to brutes; is it not also natural to man? *Euph.* It is, but with this difference, it maketh the whole of a brute, but is the lowest part or faculty of a human soul. The nature of any thing is peculiarly that which doth distinguish it from other things, not what it hath in common with them. Do you allow this to be true? *Lys.* I do. *Euph.* And is not reason that which makes the principal difference between man and other animals? *Lys.* It is. *Euph.* Reason therefore being the principal part of our nature, whatever is most reasonable should seem most natural to man. Must we not therefore think rational pleasures more agreeable to humankind than those of sense? Man and beast, having different natures, seem to have different faculties, different enjoyments, and different sorts of happiness. You can easily conceive, that the sort of life which makes the happiness of a mole or a bat, would be a very wretched one for an eagle. And may you not as well conceive that the happiness of a brute can never constitute the true happiness of a man? A beast, without reflection or remorse, without foresight, or appetite of immortality, without notion of vice or virtue, or order, or reason, or knowledge! What motive, what grounds, can there be for bringing down man, in whom are all these things, to a level with such a creature? What merit, what ambition, in the minute philosopher to make such an animal a guide or rule for human life?

XV. *Lys.* It is strange, Euphranor, that one who admits freedom of thought, as you do, should yet be such a slave to prejudice. You still talk of order and virtue, as of real things, as if our philosophers had never demonstrated, that they have no foundation in nature, and are only the effects of education. I know, said Crito, how the minute philosophers are accustomed to demonstrate this point. They consider the animal nature of man, or man so far forth as he is animal; and it must be owned that, considered in that light, he hath no sense of duty, no notion of virtue. He therefore, who should look for virtue among mere animals, or human kind as such, would look in the wrong place. But that philosopher who is attentive only to the animal part of his being, and raiseth his theories from the very dregs of our species, might probably upon second thoughts find himself mistaken. Look you, Crito, said Lysicles, my argument is with Euphranor, to whom addressing his discourse; I observe, said he, that you stand much upon the dignity of human nature. This thing of dignity is an old worn-out notion, which depends on other notions old and stale, and worn-out, such as an immaterial spirit, and a ray derived from the Divinity. But in these days men of sense make a jest of all this grandeur and dignity; and many there are would gladly exchange their share of it for the repose, and freedom, and sensuality of a brute. But comparisons are odious; waiving therefore all inquiry concerning the respective excellences of man and beast, and whether it is beneath a man to follow or imitate brute animals, in judging of the chief good and conduct of life and manners, I shall be content to appeal to the authority of men themselves, for the truth of my notions. Do but look abroad into the world, and ask the common run of men, whether pleasure of sense be not the only true, solid, substantial good of their kind? *Euph.* But might not the same vulgar sort of men prefer a piece of sign-post painting

to one of Raphael's, or a Grub-street ballad to an ode of Horace? Is there not a real difference between good and bad writing? *Lys.* There is. *Euph.* And yet you will allow there must be a maturity and improvement of understanding to discern this difference, which doth not make it therefore less real? *Lys.* I will. *Euph.* In the same manner what should hinder, but there may be in nature a true difference between vice and virtue, although it require some degree of reflection and judgment to observe it? In order to know whether a thing be agreeable to the rational nature of man, it seems one should rather observe and consult those who have most employed or improved their reason. *Lys.* Well, I shall not insist on consulting the common herd of mankind. From the ignorant and gross vulgar, I might myself appeal in many cases to men of rank and fashion. *Euph.* They are a sort of men I have not the honour to know much of by my own observation. But I remember a remark of Aristotle, who was himself a courtier, and knew them well. "Virtue, saith he,* and good sense are not the property of high birth or a great estate. Nor if they who possess these advantages, wanting a taste for rational pleasure, betake themselves to those of sense; ought we therefore to esteem them eligible, any more than we should the toys and pastimes of children, because they seem so to them?" And indeed one may be allowed to question, whether the truest estimate of things was to be expected from a mind intoxicated with luxury, and dazzled with the splendour of high living.

> Cum stupet insanis acies fulgoribus, et cum
> Acclinis falsis animus meliora recusat.—Hor.

Crito upon this observed, that he knew an English nobleman who in the prime of life professed a liberal art; and is the first man of his profession in the world; and that he was very sure he had more pleasure from the

* Ethic. ad Nicom. lib. x. c. vi.

exercise of that elegant art, than from any sensual enjoyment within the power of one of the largest fortunes and most bountiful spirits in Great Britain.

XVI. *Lys.* But why need we have recourse to the judgment of other men in so plain a case? I appeal to your own breast, consult that, and then say if sensible pleasure be not the chief good of man. *Euph.* I, for my part, have often thought those pleasures which are highest in the esteem of sensualists, so far from being the chiefest good, that it seemed doubtful, upon the whole, whether they were any good at all, any more than the mere removal of pain. Are not our wants and appetites uneasy? *Lys.* They are. *Euph.* Doth not sensual pleasure consist in satisfying them? *Lys.* It doth. *Euph.* But the cravings are tedious, the satisfaction momentary. Is it not so? *Lys.* It is; but what then? *Euph.* Why then it should seem that sensual pleasure is but a short deliverance from long pain. A long avenue of uneasiness leads to a point of pleasure, which ends in disgust or remorse. *Cri.* And he who pursues this *ignis fatuus* imagines himself a philosopher and free-thinker. *Lys.* Pedants are governed by words and notions, while the wiser men of pleasure follow fact, nature, and sense. *Cri.* But what if notional pleasures should in fact prove the most real and lasting? Pure pleasures of reason and imagination neither hurt the health, nor waste the fortune, nor gall the conscience. By them the mind is long entertained without loathing or satiety. On the other hand a notion (which with you it seems passeth for nothing) often embitters the most lively sensual pleasures, which at bottom will be found also to depend upon notion more than perhaps you imagine, it being a vulgar remark, that those things are more enjoyed by hope and foretaste of the soul than by possession. Thus much is yielded, that the actual enjoyment is very short, and the alternative of appetite and disgust long as well as uneasy. So that, upon the whole, it should seem

those gentlemen, who are called men of pleasure from their eager pursuit of it, do in reality, with great expense of fortune, ease, and health, purchase pain. *Lys.* You may spin out plausible arguments, but will after all find it a difficult matter to convince me that so many ingenious men should not be able to distinguish between things so directly opposite as pain and pleasure. How is it possible to account for this? *Cri.* I believe a reason may be assigned for it, but to men of pleasure no truth is so palatable as a fable. Jove once upon a time having ordered, that pleasure and pain should be mixed in equal proportions in every dose of human life, upon a complaint that some men endeavoured to separate what he had joined, and taking more than their share of the sweet, would leave all the sour for others, commanded Mercury to put a stop to this evil, by fixing on each delinquent a pair of invisible spectacles, which should change the appearance of things, making pain look like pleasure, and pleasure like pain, labour like recreation, and recreation like labour. From that time the men of pleasure are eternally mistaking and repenting. *Lys.* If your doctrine takes place I would fain know what can be the advantage of a great fortune, which all mankind so eagerly pursue. *Cri.* It is a common saying with Eucrates, that *a great fortune is an edged tool,* which a hundred may come at for one who knows how to use it, so much easier is the art of getting than that of spending. What its advantage is I will not say, but I will venture to declare what it is not. I am sure that where abundance excludes want, and enjoyment prevents appetites, there is not the quickest sense of those pleasures we have been speaking of, in which the footman hath often a greater share than his lord, who cannot enlarge his stomach in proportion to his estate.

XVII. Reasonable and well-educated men of all ranks have, I believe, pretty much the same amusements, notwithstanding the difference of their fortunes:

but those who are particularly distinguished as men of pleasure seem to possess it in a very small degree. *Euph.* I have heard that among persons of that character, a game of cards is esteemed a chief diversion. *Lys.* Without cards there could be no living for people of fashion. It is the most delightful way of passing an evening when gentlemen and ladies are got together, who would otherwise be at a loss what to say or do with themselves. But a pack of cards is so engaging, that it doth not only employ them when they are met, but serves to draw them together. Quadrille gives them pleasure in prospect during the dull hours of the day, they reflect on it with delight, and it furnishes discourse when it is over. *Cri.* One would be apt to suspect these people of condition pass their time but heavily, and are but little the better for their fortunes, whose chief amusement is a thing in the power of every porter or footman, who is as well qualified to receive pleasure from cards as a peer. I can easily conceive that when people of a certain turn are got together, they should prefer doing any thing to the ennui of their own conversation; but it is not easy to conceive there is any great pleasure in this. What a card-table can afford requires neither parts nor fortune to judge of. *Lys.* Play is a serious amusement that comes to the relief of a man of pleasure, after the more lively and affecting enjoyments of sense. It kills time beyond any thing, and is a most admirable anodyne to divert or prevent thought, which might otherwise prey upon the mind. *Cri.* I can easily comprehend, that no man upon earth ought to prize anodynes for the spleen, more than a man of fashion and pleasure. An ancient sage, speaking of one of that character, saith he is made wretched by disappointments and appetites, λυπεῖται ἀποτυγχάνων καὶ ἐπιθυμῶν. And if this was true of the Greeks who lived in the sun, and had so much spirit, I am apt to think it is still more so of our modern English. Something there is in our climate and com-

plexion, that makes idleness no where so much its own punishment as in England, where an uneducated fine gentleman pays for his momentary pleasures, with long and cruel intervals of spleen; for relief of which he is driven into sensual excesses, that produce a proportionable depression of spirits, which, as it createth a greater want of pleasures, so it lessens the ability to enjoy them. There is a cast of thought in the complexion of an Englishman, which renders him the most unsuccessful rake in the world. He is (as Aristotle expresseth it) at variance with himself. He is neither brute enough to enjoy his appetites, nor man enough to govern them. He knows and feels that what he pursues is not his true good, his reflection serving only to shew him that misery which his habitual sloth and indolence will not suffer him to remedy. At length being grown odious to himself, and abhorring his own company, he runs into every idle assembly, not from the hopes of pleasure, but merely to respite the pain of his own mind. Listless and uneasy at the present, he hath no delight in reflecting on what is past, or in the prospect of any thing to come. This man of pleasure, when after a wretched scene of vanity and woe his animal nature is worn to the stumps, wishes and dreads death by turns, and is sick of living, without having ever tried or known the true life of man. *Euph.* It is well this sort of life, which is of so little benefit to the owner, conduceth so much to that of the public. But pray tell me, do these gentlemen set up for minute philosophers? *Cri.* That sect, you must know, contains two sorts of philosophers, the wet and the dry. Those I have been describing are of the former kind. They differ rather in practice than in theory. As an older, graver, or duller man, from one that is younger, and more capable or fond of pleasure. The dry philosopher passeth his time but dryly. He has the honour of pimping for the vices of more sprightly men, who in return offer some small incense to his

vanity. Upon this encouragment, and to make his own mind easy when it is past being pleased, he employs himself in justifying those excesses he cannot partake in. But to return to your question, those miserable folk are mighty men for the minute philosophy. *Euph.* What hinders them then from putting an end to their lives? *Cri.* Their not being persuaded of the truth of what they profess. Some, indeed, in a fit of despair, do now and then lay violent hands on themselves. And as the minute philosophy prevails, we daily see more examples of suicide. But they bear no proportion to those who would put an end to their lives if they durst. My friend Clinias, who had been one of them, and a philosopher of rank, let me into the secret history of their doubts and fears and irresolute resolutions of making away with themselves, which last he assures me is a frequent topic with men of pleasure, when they have drunk themselves into a little spirit. It was by virtue of this mechanical valour, the renowned philosopher Hermocrates shot himself through the head. The same thing hath since been practised by several others, to the great relief of their friends. Splenetic, worried, and frightened out of their wits, they run upon their doom with the same courage as a bird runs into the mouth of a rattle-snake, not because they are bold to die, but because they are afraid to live. Clinias endeavoured to fortify his irreligion, by the discourse and opinion of other minute philosophers, who were mutually strengthened in their own unbelief by his. After this manner, authority working in a circle, they endeavoured to atheize one another. But though he pretended even to a demonstration against the being of a God, yet he could not inwardly conquer his own belief. He fell sick, and acknowledged this truth, is now a sober man and a good Christian; owns he was never so happy as since he became such, nor so wretched as while he was a minute philosopher. And he who has tried both conditions may be allowed a

proper judge of both. *Lys.* Truly a fine account of the brightest and bravest men of the age! *Cri.* Bright and brave are fine attributes. But our curate is of opinion, that all your free-thinking rakes are either fools or cowards. Thus he argues; if such a man doth not see his true interest, he wants sense; if he doth, but dare not pursue it, he wants courage. In this manner, from the defect of sense and courage, he deduceth that whole species of men, who are so apt to value themselves upon both those qualities. *Lys.* As for their courage, they are at all times ready to give proof of it; and for their understanding, thanks to nature, it is of a size not to be measured by country parsons.

XVIII. *Euph.* But Socrates, who was no country parson, suspected your men of pleasure were such through ignorance. *Lys.* Ignorance of what? *Euph.* Of the art of computing. It was his opinion that rakes cannot reckon*. And that for want of this skill they make wrong judgments about pleasure, on the right choice of which their happiness depends. *Lys.* I do not understand you. *Euph.* Do you grant that sense perceiveth only sensible things? *Lys.* I do. *Euph.* Sense perceiveth only things present. *Lys.* This too I grant. *Euph.* Future pleasures, therefore, and pleasures of the understanding, are not to be judged of by actual sense. *Lys.* They are not. *Euph.* Those therefore who judge of pleasure by sense, may find themselves mistaken at the foot of the account.

† Cum lapidosa chiragra
Contudit articulos veteris ramalia fagi,
Tum crassos transisse dies lucemque palustrem,
Et sibi jam seri vitam ingemuere relictam.

To make a right computation, should you not consider all the faculties and all the kinds of pleasure, taking into your account the future as well as the present, and

* Plato in Protag. † Persius, Sat. v.

rating them all according to their true value? *Cri.* The Epicureans themselves allowed, that pleasure which procures a greater pain, or hinders a greater pleasure, should be regarded as a pain; and, that pain which procures a greater pleasure, or prevents a greater pain, is to be accounted a pleasure. In order therefore to make a true estimate of pleasure, the great spring of action, and that from whence the conduct of life takes its bias, we ought to compute intellectual pleasures and future pleasures, as well as present and sensible: we ought to make allowance in the valuation of each particular pleasure, for all the pains and evils, for all the disgust, remorse, and shame, that attend it: we ought to regard both kind and quantity, the sincerity, the intenseness, and the duration, of pleasures. *Euph.* And all these points duly considered, will not Socrates seem to have had reason on his side, when he thought ignorance made rakes, and particularly their being ignorant of what he calls the science of more and less, greater and smaller, equality and comparison, that is to say, of the art of computing? *Lys.* All this discourse seems notional. For real abilities of every kind, it is well known, we have the brightest men of the age among us. But all those who know the world do calculate that what you call a good Christian, who hath neither a large conscience, nor unprejudiced mind, must be unfit for the affairs of it. Thus you see, while you compute yourselves out of pleasure, others compute you out of business. What then are you good for with all your computation? *Euph.* I have all imaginable respect for the abilities of free-thinkers. My only fear was, their parts might be too lively for such slow talents as forecast and computation, the gifts of ordinary men.

XIX. *Cri.* I cannot make them the same compliment that Euphranor does. For though I shall not pretend to characterize the whole sect, yet thus much I may truly affirm, that those who have fallen in my way

have been mostly raw men of pleasure, old sharpers in business, or a third sort of lazy sciolists, who are neither men of business, nor men of speculation, but set up for judges or critics in all kinds, without having made a progress in any. These among men of the world pass for profound theorists, and among speculative men would seem to know the world; a conceited race, equally useless to the affairs and studies of mankind. Such as these, for the most part, seem to be sectaries of the minute philosophy. I will not deny that now and then you may meet with a man of easy manners, that, without those faults and affectations, is carried into the party by the mere stream of education, fashion, or company; all which do in this age prejudice men against religion, even those who mechanically rail at prejudice. I must not forget that the minute philosophers have also a strong party among the beaux and fine ladies; and, as affectations out of character are often the strongest, there is nothing so dogmatical and inconvincible as one of these fine things, when it sets up for free-thinking. But, be these professors of the sect never so dogmatical, their authority must needs be small with men of sense; for who would choose for his guide in the search for truth, a man whose thoughts and time are taken up with dress, visits, and diversions? or whose education hath been behind a counter, or in an office? or whose speculations have been employed on the forms of business, who are only well read in the ways and commerce of mankind, in stockjobbing, purloining, supplanting, and bribing? Or would any man in his senses give a fig for meditations and discoveries made over a bottle? And yet it is certain, that instead of thought, books, and study, most free-thinkers are the proselytes of a drinking club. Their principles are often settled, and decisions on the deepest points made, when they are not fit to make a bargain. *Lys.* You forget our writers, Crito. They make a world of proselytes. *Cri.* So would worse

writers in such a cause. Alas! how few read! and of these, how few are able to judge! How many wish your notions true! How many had rather be diverted than instructed! How many are convinced by a title! I may allow your reasons to be effectual, without allowing them to be good. Arguments, in themselves of small weight, have great effect, when they are recommended by a mistaken interest, when they are pleaded for by passion, when they are countenanced by the humour of the age; and above all, with some sort of men, when they are against law, government, and established opinions, things which, as a wise and good man would not depart from without clear evidence, a weak or a bad man will affect to disparage on the slightest grounds. *Lys.* And yet the arguments of our philosophers alarm. *Cri.* The force of their reasoning is not what alarms: their contempt of laws and government is alarming, their application to the young and ignorant is dangerous. *Euph.* But without disputing or disparaging their talent at ratiocination, it seems very possible their success might not be owing to that alone. May it not in some measure be ascribed to the defects of others, as well as to their own perfections? My friend Eucrates used to say, that the church would thrive and flourish beyond all opposition, if some certain persons minded piety more than politics, practices than polemics, fundamentals than consectaries, substance than circumstance, things than notions, and notions than words. *Lys.* Whatever may be the cause, the effects are too plain to be denied. And when a considering man observes that our notions do, in this most learned and knowing age, spread and multiply, in opposition to established laws, and every day gain ground against a body so numerous, so learned, so well supported, protected, and encouraged, for the service and defence of religion: I say, when a man observes and considers all this, he will be apt to ascribe it to the force of truth, and the merits of our cause;

which, had it been supported with the revenues and establishments of the church and universities, you may guess what a figure it would make, by the figure that it makes without them. *Euph.* It is much to be pitied that the learned professors of your sect do not meet with the encouragement they deserve. *Lys.* All in due time. People begin to open their eyes. It is not impossible but those revenues that in ignorant times were applied to a wrong use, may hereafter, in a more enlightened age, be applied to a better. *Cri.* But why professors and encouragement for what needs no teaching? An acquaintance of mine has a most ingenious footman that can neither write nor read, who learned your whole system in half an hour: he knows when and how to nod, shake his head, smile, and give a hint, as well as the ablest sceptic, and is in fact a very minute philosopher. *Lys.* Pardon me, it takes time to unlearn religious prejudices, and requires a strong head. *Cri.* I do not know how it might have been once upon a time. But in the present laudable education, I know several who have been imbued with no religious notions at all; and others who have had them so very slight, that they rubbed off without the least pains.

XX. Panope, young and beautiful, under the care of her aunt, an admirer of the minute philosophy, was kept from learning the principles of religion, that she might not be accustomed to believe without a reason, nor assent to what she did not comprehend. Panope was not indeed prejudiced with religious notions, but got a notion of intriguing, and a notion of play, which ruined her reputation by fourteen, and her fortune by four-and-twenty. I have often reflected on the different fate of two brothers in my neighbourhood. Cleon, the elder, being designed an accomplished gentleman, was sent to town, and had the first part of his education in a great school: what religion he learned there was soon unlearned in a certain celebrated society, which, till we

have a better, may pass for a nursery of minute philosophers. Cleon dressed well, could cheat at cards, had a nice palate, understood the mystery of the die, was a mighty man in the minute philosophy; and having shined a few years in these accomplishments, he died before thirty, childless and rotten, expressing the utmost indignation that he could not outlive that old dog his father; who, having a great notion of polite manners, and knowledge of the world, had purchased them to his favourite son with much expense, but had been more frugal in the education of Chærephon, the younger son, who was brought up at a country school, and entered a commoner in the university, where he qualified himself for a parsonage in his father's gift, which he is now possessed of, together with the estate of the family, and a numerous offspring. *Lys.* A pack of unpolished cubs, I warrant. *Cri.* Less polished, perhaps, but more sound, more honest, and more useful, than many who pass for fine gentlemen. Crates, a worthy justice of the peace in this country, having had a son miscarry at London, by the conversation of a minute philosopher, used to say, with a great air of complaint, If a man spoils my corn, or hurts my cattle, I have a remedy against him; but if he spoils my children I have none. *Lys.* I warrant you he was for penal methods: he would have had a law to persecute tender consciences. *Cri.* The tender conscience of a minute philosopher! He who tutored the son of Crates, soon after did justice on himself. For he taught Lycidas, a modest young man, the principles of his sect. Lycidas, in return, debauched his daughter, an only child: upon which, Charmides (that was the minute philosopher's name) hanged himself. Old Bubalion in the city, is carking, starving, and cheating, that his son may drink, game, and keep mistresses, hounds, and horses, and die in a jail. Bubalion nevertheless thinks himself wise, and passeth for one that minds the main chance. He is a minute philosopher,

which learning he acquired behind the counter from the works of Prodicus and Tryphon. This same Bubalion was one night at supper, talking against the immortality of the soul with wo or three grave citizens, one of whom the next day declared himself a bankrupt, with five thousand pounds of Bubalion's in his hands; and the night following he received a note from a servant, who had during his lecture waited at table, demanding the sum of fifty guineas to be laid under a stone, and concluding with most terrible threats and imprecations. *Lys.* Not to repeat what hath been already demonstrated, that the public is at bottom no sufferer by such accidents, which in truth are inconvenient only to private persons, who in their turn too may reap the benefit of them: I say, not to repeat all that hath been demonstrated on that head, I shall only ask you whether there would not be rakes and rogues, although we did not make them? Believe me, the world always was and always will be the same, as long as men are men. *Cri.* I deny that the world is always the same. Human nature, to use Alciphron's comparison, is like land, better or worse, as it is improved, and according to the seeds or principles sown in it. Though nobody held your tenets, I grant there might be bad men by the force of corrupt appetites and irregular passions: but where men, to the force of appetite and passion, add that of opinion, and are wicked from principle, there will be more men wicked, and those more incurably and outrageously so. The error of a lively rake lies in his passions, and may be reformed: but the dry rogue who sets up for judgment is incorrigible. It is an observation of Aristotle's, that there are two sorts of debauchees, the ἀκρατής, and the ἀκόλαστος, of which the one is so against his judgment, the other with it, and that there may be hopes of the former, but none of the latter. And in fact I have always observed, that a rake who is a minute philosopher, when grown old, becomes a sharper in bu

siness. *Lys.* I could name you several such who have grown most noted patriots. *Cri.* Patriots! such patriots as Catiline and Mark Antony. *Lys.* And what then? Those famous Romans were brave though unsuccessful. They wanted neither sense nor courage, and if their schemes had taken effect, the brisker part of their countrymen had been much the better for them.

XXI. The wheels of government go on, though wound up by different hands; if not in the same form, yet in some other, perhaps a better. There is an endless variety in nature. Weak men, indeed, are prejudiced towards rules and systems in life and government; and think if these are gone all is gone: but a man of a great soul and free spirit delights in the noble experiment of blowing up systems and dissolving governments, to mould them anew upon other principles and in another shape. Take my word for it, there is a plastic nature in things that seeks its own end. Pull a state to pieces, jumble, confound, and shake together, the particles of human society, and then let them stand a while, and you shall soon see them settle of themselves in some convenient order, where heavy heads are lowest, and men of genius uppermost. *Euph.* Lysicles speaks his mind freely. *Lys.* Where was the advantage of free-thinking if it were not attended with free-speaking, or of free-speaking if it did not produce free-acting? We are for absolute, independent, original freedom in thought, word, and deed. Inward freedom without outward is good for nothing but to set a man's judgment at variance with his practice. *Cri.* This free way of Lysicles may seem new to you; it is not so to me. As the minute philosophers lay it down for a maxim, that there is nothing sacred of any kind, nothing but what may be made a jest of, exploded, and changed like the fashion of their clothes; so nothing is more frequent than for them to utter their schemes and principles, not only in select companies, but even in public. In a certain part of the world,

where ingenious men are wont to retail their speculations, I remember to have seen a valetudinarian in a long wig and cloak sitting at the upper end of a table, with half a dozen of disciples about him. After he had talked about religion in a manner and with an air that would make one think atheism established by law, and religion only tolerated, he entered upon civil government, and observed to his audience, that the natural world was in a perpetual circulation: Animals, said he, who draw their sustenance from the earth, mix with that same earth, and in their turn become food for vegetables, which again nourish the animal kind: the vapours that ascend from this globe descend back upon it in showers: the elements alternately prey upon each other: that which one part of nature loseth another gains, the sum total remaining always the same, being neither bigger nor lesser, better nor worse, for all these intestine changes. Even so, said this learned professor, the revolutions in the civil world are no detriment to human kind, one part whereof rises as the other falls, and wins by another's loss. A man therefore who thinks deeply, and hath an eye on the whole system, is no more a bigot to government than to religion. He knows how to suit himself to occasions, and make the best of every event: for the rest, he looks on all translations of power and property from one hand to another with a philosophic indifference. Our lecturer concluded his discourse with a most ingenious analysis of all political and moral virtues into their first principles and causes, shewing them to be mere fashions, tricks of state, and illusions on the vulgar. *Lys.* We have been often told of the good effects of religion and learning, churches and universities: but I dare affirm, that a dozen or two ingenious men of our sect have done more towards advancing real knowledge, by extemporaneous lectures in the compass of a few years, than all the ecclesiastics put together for as many centuries. *Euph.* And the nation

no doubt thrives accordingly; but it seems, Crito, you have heard them discourse. *Cri.* Upon hearing this and other lectures of the same tendency, methought it was needless to establish professors for the minute philosophy in either university, while there are so many spontaneous lecturers in every corner of the streets, ready to open men's eyes, and rub off their prejudices about religion, loyalty, and public spirit. *Lys.* If wishing was to any purpose, I could wish for a telescope that might draw into my view things future in time, as well as distant in place. Oh! that I could but look into the next age, and behold what it is that we are preparing to be, the glorious harvest of our principles, the spreading of which hath produced a visible tendency in the nation towards something great and new. *Cri.* One thing I dare say you would expect to see, be the changes and agitations of the public what they will, that is, every free-thinker upon his legs. You are all sons of nature, who cheerfully follow the fortunes of the commen mass. *Lys.* And it must be owned we have a maxim, that *each should take care of one.* *Cri.* Alas, Lysicles, you wrong your own character. You would feign pass upon the world and upon yourselves for interested cunning men: but can any thing be more disinterested than to sacrifice all regards to the abstracted speculation of truth? Or can any thing be more void of all cunning than to publish your discoveries to the world, teach others to play the whole game, and arm mankind against yourselves?

XXII. If a man may venture to suggest so mean a thought as the love of their country, to souls fired with the love of truth, and the love of liberty, and grasping the whole extent of nature, I would humbly propose it to you, gentlemen, to observe the caution practised by all other discoverers, projectors, and makers of experiments, who never hazard all on the first trial. Would it not be prudent to try the success of your principles on

a small model in some remote corner? For instance, set up a colony of atheists in Monomotapa, and see how it prospers before you proceed any farther at home: half a dozen ship-load of minute philosophers might easily be spared upon so good a design. In the meantime, you, gentlemen, who have found out that there is nothing to be hoped or feared in another life, that conscience is a bug-bear, that the bands of government and the cement of human society are rotten things, to be resolved and crumbled into nothing by the argumentation of every minute philosopher, be so good as to keep these sublime discoveries to yourselves: suffer us, our wives, our children, our servants, and our neighbours, to continue in the belief and way of thinking established by the laws of our country. In good earnest, I wish you would go try your experiments among the Hottentots or Turks. *Lys.* The Hottentots we think well of, believing them to be an unprejudiced people: but it is to be feared their diet and customs would not agree with our philosophers. As for the Turks, they are bigots, who have a notion of God and a respect for Jesus Christ; I question whether it might be safe to venture among them. *Cri.* Make your experiment then in some other part of Christendom. *Lys.* We hold all other Christian nations to be much under the power of prejudice: even our neighbours the Dutch are too much prejudiced in favour of their religion by law established, for a prudent man to attempt innovations under their government. Upon the whole it seems, we can execute our schemes no where with so much security and such prospect of success as at home. Not to say that we have already made a good progress. Oh! that we could but once see a parliament of true, staunch, libertine free-thinkers! *Cri.* God forbid! I should be sorry to have such men for my servants, not to say, for my masters. *Lys.* In that we differ.

XXIII. But you will agree with me that the right

way to come at this, was to begin with extirpating the prejudices of particular persons. We have carried on this work for many years with much art and industry, and at first with secrecy, working like moles under ground, concealing our progress from the public, and our ultimate views from many, even of our own proselytes, blowing the coals between polemical divines, laying hold on and improving every incident, which the passions and folly of churchmen afforded, to the advantage of our sect. As our principles obtained, we still proceeded to farther inferences; and as our numbers multiplied, we gradually disclosed ourselves and our opinions: where we are now I need not say. We have stubbed and weeded and cleared human nature to that degree, that in a little time, leaving it alone without any labouring or teaching, you shall see natural and just ideas sprout forth of themselves. *Cri.* But I have heard a man, who had lived long and observed much, remark, that the worst and most unwholesome weed was this same minute philosophy. We have had, said he, divers epidemical distempers in the state, but this hath produced of all others the most destructive plague. Enthusiasm had its day, its effects were violent and soon over: this infects more quietly, but spreads widely: the former bred a fever in the state, this breeds a consumption and final decay. A rebellion or an invasion alarms and puts the public upon its defence; but a corruption of principles works its ruin more slowly perhaps, but more surely. This may be illustrated by a fable I somewhere met with in the writings of a Swiss philosopher, setting forth the original of brandy and gunpowder. The government of the north being once upon a time vacant, the prince of the power of the air convened a council in hell, wherein, upon competition between two demons of rank, it was determined they should both make trial of their abilities, and he should succeed who did most mischief. One made his appearance in the

shape of gunpowder, the other in that of brandy: the former was a declared enemy, and roared with a terrible noise, which made folks afraid, and put them on their guard: the other passed as a friend and a physician through the world, disguised himself with sweets, and perfumes, and drugs, made his way into the ladies' cabinets, and the apothecaries' shops, and under the notion of helping digestion, comforting the spirits, and cheering the heart, produced directly contrary effects; and having insensibly thrown great numbers of human kind into a lingering but fatal decay, was found to people hell and the grave so fast as to merit the government which he still possesses.

XXIV. *Lys.* Those who please may amuse themselves with fables and allegories. This is plain English: liberty is a good thing, and we are the support of liberty. *Cri.* To me is seems that liberty and virtue were made for each other. If any man wish to enslave his country, nothing is a fitter preparative than vice; and nothing leads to vice so surely as irreligion. For my part, I cannot comprehend or find out, after having considered it in all lights, how this crying down religion should be the effect of honest views towards a just and legal liberty. Some seem to propose an indulgence in vice. Others may have in prospect the advantage which needy and ambitious men are used to make in the ruin of a state; one may indulge a pert petulant spirit; another hope to be esteemed among libertines, when he wants wit to please or abilities to be useful. But, be men's views what they will, let us examine what good your principles have done; who has been the better for the instructions of these minute philosophers? Let us compare what we are in respect of learning, loyalty, honesty, wealth, power, and public spirit, with what we have been. Free-thinking (as it is called) hath wonderfully grown of late years. Let us see what hath grown up with it, or what effects it hath produced. To make a catalogue of ills

is disagreeable; and the only blessing it can pretend to is luxury: that same blessing which revenged the world upon old Rome: that same luxury that makes a nation, like a diseased pampered body, look full and fat with one foot in the grave. *Lys.* You mistake the matter. There are no people who think and argue better about the public good of a state than our sect; who have also invented many things tending to that end, which we cannot as yet conveniently put in practice. *Cri.* But one point there is from which it must be owned the public hath already received some advantage, which is the effect of your principles flowing from them, and spreading as they do: I mean that old Roman practice of self-murder, which at once puts an end to all distress, ridding the world and themselves of the miserable. *Lys.* You were pleased before to make some reflections on this custom, and laugh at the irresolution of our free-thinkers; but I can aver for matter of fact, that they have often recommended it by their example as well as arguments, and that it is solely owing to them that a practice, so useful and magnanimous, hath been taken out of the hands of lunatics, and restored to that credit among men of sense which it anciently had. In whatever light you may consider it, this is in fact a solid benefit: but the best effect of our principles, is that light and truth so visibly shed abroad in the world. From how many prejudices, errors, perplexities, and contradictions, have we freed the minds of our fellow-subjects! How many hard words and intricate absurd notions had possessed the minds of men before our philosophers appeared in the world! But now even women and children have right and sound notions of things. What say you to this, Crito? *Cri.* I say, with respect to these great advantages of destroying men and notions, that I question whether the public gains as much by the latter as it loseth by the former. For my own part, I had rather my wife and children all believed what they had no notion of, and daily pronounced words with-

out a meaning, than that any one of them should cut his throat, or leap out of a window. Errors and nonsense, as such, are of small concern in the eyes of the public, which considers not the metaphysical truth of notions, so much as the tendency they have to produce good or evil. Truth itself is valued by the public, as it hath an influence, and is felt in the course of life. You may confute a whole shelf of school-men, and discover many speculative truths, without any great merit towards your country. But if I am not mistaken, the minute philosophers are not the men to whom we are most beholden for discoveries of that kind: this I say must be allowed, supposing, what I by no means grant, your notions to be true. For, to say plainly what I think, the tendency of your opinions is so bad, that no good man can endure them, and your arguments for them so weak that no wise man will admit them. *Lys.* Has it not been proved as clear as the meridian sun, that the politer sort of men lead much happier lives, and swim in pleasure, since the spreading of our principles? But, not to repeat or insist further on what has been so amply deduced, I shall only add, that the advantages flowing from them extend to the tenderest age and the softer sex: our principles deliver children from terrors by night, and ladies from splenetic hours by day. Instead of these old-fashioned things, prayers and the Bible, the grateful amusements of drams, dice, and billets-doux, have succeeded. The fair sex have now nothing to do but dress and paint, drink and game, adorn and divert themselves, and enter into all the sweet society of life. *Cri.* I thought, Lysicles, the argument from pleasure had been exhausted: but since you have not done with that point, let us once more by Euphranor's rule cast up the account of pleasure and pain, as credit and debt, under distinct articles. We will set down in the life of your fine lady rich clothes, dice, cordials, scandal, late hours, against vapours, distaste, remorse, losses at play, and the terrible distress of

ill-spent age increasing every day: suppose no cruel accident of jealousy, no madness or infamy of love, yet at the foot of the account you shall find that empty, giddy, gaudy, fluttering thing, not half so happy as a butterfly or a grasshopper on a summer's day: and for a rake or man of pleasure, the reckoning will be much the same, if you place listlessness, ignorance, rottenness, loathing, craving, quarrelling, and such qualities or accomplishments, over against his little circle of fleeting amusements, long woe against momentary pleasure; and if it be considered that, when sense and appetite go off, though he seek refuge from his conscience in the minute philosophy, yet in this you will find if you sift him to the bottom, that he affects much, believes little, knows nothing. Upon which Lysicles turning to me, observed, that Crito might dispute against fact if he pleased, but that every one must see the nation was the merrier for their principles. True, answered Crito, we are a merry nation indeed: young men laugh at the old; children despise their parents: and subjects make a jest of the government: happy effects of the minute philosophy!

XXV. *Lys.* Infer what effects you please: that will not make our principles less true. *Cri.* Their truth is not what I am now considering. The point at present is the usefulness of your principles; and to decide this point we need only take a short view of them fairly proposed and laid together: that there is no God or providence; that man is as the beasts that perish; that his happiness as theirs consists in obeying animal instincts, appetites, and passions: that all stings of conscience and sense of guilt are prejudices and errors of education; that religion is a state trick; that vice is beneficial to the public; that the soul of man is corporeal, and dissolveth like a flame or vapour; that man is a machine actuated according to the laws of motion; that consequently he is no agent, or subject of guilt; that a wise man will make his own particular individual interest in this present life

the rule and measure of all his actions: these and such opinions are, it seems, the tenets of a minute philosopher, who is himself, according to his own principles, an organ played on by sensible objects, a ball bandied about by appetites and passions; so subtle is he as to be able to maintain all this by artful reasonings; so sharp-sighted and penetrating to the very bottom of things as to find out, that the most interested occult cunning is the only true wisdom. To complete his character, this curious piece of clock-work, having no principle of action within itself, and denying that it hath or can have any one free thought or motion, sets up for the patron of liberty, and earnestly contends for free-thinking. Crito had no sooner made an end but Lysicles addressed himself to Euphranor and me: Crito, said he, has taken a world of pains, but convinced me only of one single point, to wit, that I must despair of convincing him. Never did I in the whole course of my life meet with a man so deeply immersed in prejudice: let who will pull him out for me. But I entertain better hopes of you. I can answer, said I, for myself, that my eyes and ears are always open to conviction: I am attentive to all that passes, and upon the whole shall form, whether right or wrong, a very impartial judgment. Crito, said Euphranor, is a more enterprising man than I, thus to rate and lecture a philosopher For my part, I always find it easier to learn than to teach. I shall therefore beg your assistance to rid me of some scruples about the tendency of your opinions; which I find myself unable to master, though never so willing. This done, though we should not tread exactly in the same steps, nor perhaps go the same road; yet we shall not run in all points diametrically opposite one to another.

XXVI. Tell me now, Lysicles, you who are a minute observer of things, whether a shade be more agreeable at morning, or evening, or noon-day. *Lys.* Doubt-

less, at noon-day. *Euph.* And what disposeth men to rest? *Lys.* Exercise. *Euph.* When do men make the greatest fires? *Lys.* In the coldest weather. *Euph.* and what creates a love for icy liquors? *Lys.* Excessive heat. *Euph.* What if you raise a pendulum to a great height on one side? *Lys.* It will, when left to itself, ascend so much the higher on the other. *Euph.* It should seem, therefore, that darkness ensues from light, rest from motion, heat from cold, and in general that one extreme is the consequence of another? *Lys.* It should seem so. *Euph.* And doth not this observation hold in the civil as well as natural world? Doth not power produce licence, and licence power? Do not whigs make tories, and tories whigs: bigots make atheists, and atheists bigots? *Lys.* Granting this to be true. *Euph.* Will it not hence follow, that as we abhor slavish principles, we should avoid running into licentious ones? I am and always was a sincere lover of liberty, legal English liberty; which I esteem a chief blessing, ornament, and comfort of life, and the great prerogative of an Englishman. But is it not to be feared, that upon the nation's running into a licentiousness which hath never been endured in any civilized country, men feeling the intolerable evils of one extreme may naturally fall into the other? You must allow, the bulk of mankind are not philosophers, like you and Alciphron. *Lys.* This I readily acknowledge. *Euph.* I have another scruple about the tendency of your opinions. Suppose you should prevail, and destroy this protestant church and clergy: how could you come at the popish? I am credibly informed there is a great number of emissaries of the church of Rome disguised in England: who can tell what harvest a clergy so numerous, so subtle, and so well furnished with arguments to work on vulgar and uneducated minds, may be able to make in a country despoiled of all religion, and feeling the want of it? Who can tell whether the spirit of

free-thinking ending with the opposition, and the vanity with the distinction, when the whole nation are alike infidels; who can tell, I say, whether in such a juncture the men of genius themselves may not affect a new distinction, and be the first converts to popery? *Lys.* And suppose they should. Between friends it would be no great matter. These are our maxims. In the first place we hold it would be best to have no religion at all. Secondly, we hold that all religions are indifferent. If therefore upon trial we find the country cannot do without a religion, why not popery as well as another? I know several ingenious men of our sect, who, if we had a popish prince on the throne, would turn papists tomorrow. This is a paradox, but I shall explain it. A prince whom we compliment with our religion, to be sure must be grateful. *Euph.* I understand you. But what becomes of free-thinking all the while? *Lys.* Oh! we should have more than ever of that, for we should keep it all to ourselves. As for the amusement of retailing it, the want of this would be largely compensated by solid advantages of another kind. *Euph.* It seems then, by this account, the tendency you observed in the nation towards something great and new, proves a tendency towards popery and slavery. *Lys.* Mistake us not, good Euphranor. The thing first in our intention is consummate liberty: but if this will not do, and there must after all be such things tolerated as religion and government, we are wisely willing to make the best of both. *Cri.* This puts me in mind of a thought I have often had, that the minute philosophers are dupes of the Jesuits. The two most avowed, professed, busy, propagators of infidelity, in all companies, and upon all occasions, that I ever met with, were both bigoted papists, and being both men of considerable estates, suffered considerably on that score; which it is wonderful their thinking disciples should never reflect upon. Hegemon, a most distinguished writer among the minute philoso-

phers, and hero of the sect, I am well assured, was once a papist, and never heard that he professed any other religion. I know that many of the church of Rome abroad, are pleased with the growth of infidelity among us, as hoping it may make way for them. The emissaries of Rome are known to have personated several other sects, which from time to time have sprung up amongst us, and why not this of the minute philosophers, of all others the best calculated to ruin both church and state? I myself have known a Jesuit abroad talk among English gentlemen like a free-thinker. I am credibly informed, that Jesuits, known to be such by the minute philosophers at home, are admitted into their clubs: and I have observed them to approve, and speak better of the Jesuits, than of any other clergy whatsoever. Those who are not acquainted with the subtle spirit, the refined politics, and wonderful economy, of that renowned society, need only read the account given of them by the Jesuit Inchofer, in his book De Monarchia Solipsorum; and those who are, will not be surprised they should be able to make dupes of our minute philosophers: dupes, I say, for I can never think they suspect they are only tools to serve the ends of cunninger men than themselves. They seem to me drunk and giddy with a false notion of liberty, and spurred on by this principle to make mad experiments on their country, they agree only in pulling down all that stands in their way; without any concerted scheme, and without caring or knowing what to erect in its stead. To hear them, as I have often done, descant on the moral virtues, resolve them into shame, then laugh at shame as a weakness, admire the unconfined lives of savages, despise all order and decency of education, one would think the intention of these philosophers was, when they had pruned and weeded the notions of their fellow-subjects, and divested them of their prejudices, to strip them of their clothes, and fill the country with naked

followers of nature, enjoying all the privileges of brutality. Here Crito made a pause, and fixed his eyes on Alciphron, who during this whole conversation had sat thoughtful and attentive, without saying a word, and with an air one while dissatisfied at what Lysicles advanced, another serene and pleased, seeming to approve some better thought of his own. But the day being now far spent, Alciphron proposed to adjourn the argument till the following; when, said he, I shall set matters on a new foundation, and in so full and clear a light, as, I doubt not, will give entire satisfaction. So we changed the discourse, and after a repast upon cold provisions, took a walk on the strand, and in the cool of the evening returned to Crito's.

END OF VOL. I.

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